

AGRICULTURAL OUTLOOK

May 1987

Economic Research Service
United States Department of Agriculture



Mandatory Supply Contracts
and Their Effects

AGRICULTURAL OUTLOOK

May 1987/AO-130



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In Brief . . . News of Soybean Acreage, the Wheat Market, the CPI

Economic growth and lower prices are contributing to substantial gains in world crop consumption, but trade in most commodities is showing only a weak recovery. Nevertheless, lower loan rates and Government trade programs are helping the United States recover lost shares of world markets, and export prospects are improving for feed grains, soybean meal, and soybean oil. Corn sales to Japan, Korea, and the USSR have picked up.

The U.S. livestock and poultry sectors are benefiting from lower feed prices. Total meat supplies will likely approach a record in second-half 1987. Although beef supplies are declining, hog inventories will expand and poultry production will continue to gain.

U.S. imports of pork and live hogs are forecast to drop this year, while exports will rise. Canadian hogs are now priced lower than U.S., but some strengthening of the Canadian dollar is forecast for late 1987. So, U.S. imports of Canadian hogs will likely slow by yearend. U.S. pork exports to Japan are rising as the yen strengthens.

World wheat utilization has risen to an estimated 517 million metric tons this year, compared with 235 million in 1960. The average gain has been about 11 million tons per year. If that rate prevails until 2000, world wheat use will rise to about 660 million metric tons. Most of the increase is occurring in low-income countries where per capita food consumption still has not reached its physical limits and where grains, rather than meat, are the principal food.

About two-thirds of U.S. soybean acreage is in the North Central region, where corn and soybeans are grown primarily as competing crops or in rotation. Consequently, soybean-corn price ratios have been assumed to reflect farmers' expectations of returns at harvest time.

However, a ratio of soybean and corn expected net returns more fully re-



flects farmers' choices when making planting decisions. One reason is that during the 1980's an increasing share of farmers' revenue for corn has come from Government program payments. Also, corn yields rose an average 3.15 bushels a year during 1969-86, while soybean yields rose only 0.46 bushels.

Florida's orange juice pack could be 14 percent larger than last season because of a bigger crop and higher yields. Spring area for 7 fresh-market vegetables is estimated up 8 percent from 1986. Tobacco growers plan to grow 2 percent more tobacco in 1987, because of larger effective quotas.

Production costs per planted acre for the major crops are forecast to drop 1 to 3 percent in 1987. Total operating expenses—for both crops and livestock—are forecast down 3 to 6 percent, depending on the region.

Variable expenses are showing the largest declines. Reduced fertilizer and agricultural chemical prices are leading the way, in part because of lower 1986 energy costs. Overall, eight of the ten crop categories making up USDA's prices paid index are forecast down for 1987.

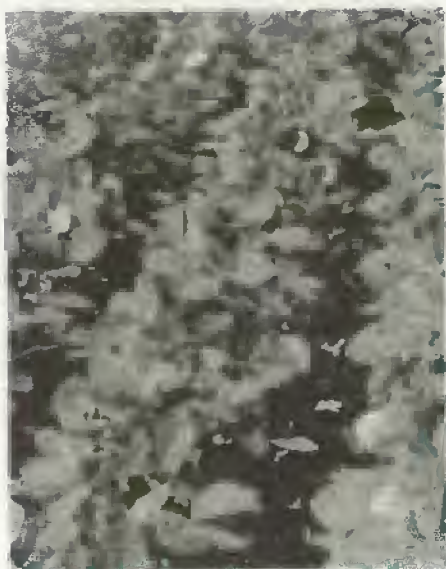
The Consumer Price Index has a new look for 1987. The changes result from 5 years of research to update the fixed market basket of goods and services on which the CPI is based. The most significant change is that food has fallen from constituting 19 percent of total consumer expenditures to making up only 16 percent.

Consumer spending for domestically produced farm foods is expected to gain nearly 4.5 percent in 1987, rising to about \$377 billion. Retail food prices are forecast to increase 2 to 3 percent, accounting for much of the rise in spending. The price of food away from home will go up slightly more—3 to 4 percent.

The Immigration Reform and Control Act of 1986 seeks to prevent illegal aliens from working on U.S. farms. However, the new law will grant legal status to many aliens and also help farmers hire foreign seasonal workers legally. On average, about 1.1 million hired laborers were working on U.S. farms at any one time in 1985. Only a small share of these were illegal aliens.

Mandatory supply controls—agricultural policies which administratively determine how much farmers can produce and sell—can be assessed by examining controlled sectors in other countries. Study of the dairy and poultry industries in Australia, Canada, and Israel shows that controls tend to result in stable but higher consumer prices and higher gross incomes for farmers.

However, mandatory controls make it more difficult for new farmers to enter the sector, and farm numbers drop despite the income generated by the controls. In fact, mandatory controls may accelerate the decline in farm numbers, as quota holders take advantage of the lucrative opportunity to sell their quotas and leave farming. Mandatory supply control programs reduce government spending on farm programs, but do not eliminate it: export subsidies and the cost of enforcing production controls can be substantial.



Agricultural Economy

Over the last 4 years, the trend in overall U.S. indebtedness has been dramatically different from anything seen in the previous 40 years. This change has important implications for U.S. agriculture because it affects the macroeconomic environment in which agriculture must operate.

Total U.S. debt, including debts owed by business, Government, and consumers, stood at 170 percent of GNP at the end of World War II. After an abrupt decline and some instability during the early 1950's, total debt as a percent of GNP grew slowly and steadily through the late 1950's to 1980, when it again reached 170 percent of GNP.

Composition of U.S. Debt Has Shifted

Federal Government debt as a percent of GNP declined continuously from its 1945 postwar high of 118 percent until it reached a low of 25 percent in 1974. It was almost constant from 1974 to 1980. In contrast, non-Federal debt rose steadily from 52 percent of GNP in 1945 to 143 percent in 1980.

Since 1982, the 35-year trends in total and Federal debt as a percent of GNP have been shattered. By 1986, total debt reached about 210 percent of GNP, owing to a string of record Federal budget deficits and a 22-percentage-point increase in non-Federal debt as a percent of GNP.

Higher Federal Debt Can Bring Higher Interest, Inflation

Are these increases cause for alarm? If the economy is running substantially under capacity, Government spending with borrowed dollars could kick off faster growth by providing greater demand. On the other hand, an increase in Federal borrowing is generally thought to lead to an increase in inflation-adjusted (real) interest rates, especially if the economy is running near capacity.

If the debt increase causes U.S. real interest rates to rise relative to the rest of the world, U.S. debt becomes more attractive to foreign investors. In their attempt to buy U.S. securities to get the higher interest rates, the foreign investors demand more dollars and drive up the dollar's value relative to other currencies.

The higher exchange rate makes it difficult for domestic producers to sell goods abroad, while making imported goods cheaper to U.S. consumers. A trade deficit is a likely consequence, and sectors of the U.S. economy dependent on exports, such as agriculture, may be hurt under such conditions.

These international effects have in fact occurred and in large part determined the recent performance of the U.S. economy. Between 1982 and 1985, real interest rates were about 4 percentage points higher in the United States than in the rest of the world. Foreign capital inflows have exceeded U.S. outflows for 5 straight years, something that has not happened since at least 1940.

Foreign capital inflows helped to drive the value of the dollar up 37 percent between 1981 and 1985, and prices of imports fell about 20 percent. The 1986 trade and Federal budget deficits were both records, prompting observers to label the situation the "twin deficit problem."

Dangers to U.S. Economy: Capital Outflows, Trade War

There are two possibilities which, although unlikely, would jolt the U.S. economy in general and agriculture in particular:

As Percent of GNP, Private Debt Growing Faster Than Federal

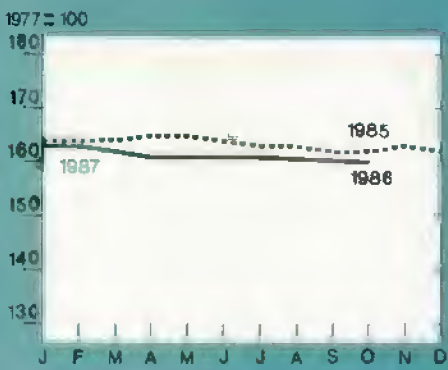


- An end to foreign inflows of capital. This could happen if foreigners lost confidence in the United States' ability to reduce its budget deficit. Should the inflows stop, the exchange value of the dollar would plummet, inflation would ignite again, real interest rates would rise, and the general economy would contract. While the fall in the value of the dollar would help agriculture on the export side, rising real interest rates and lower U.S. demand would hurt the sector.
- Protectionist legislation. Other countries would likely retaliate against such legislation, and a trade war could lead to declines in production and employment worldwide. Real interest rates would rise and sectors facing foreign retaliation, such as U.S. agriculture, would be hurt substantially.

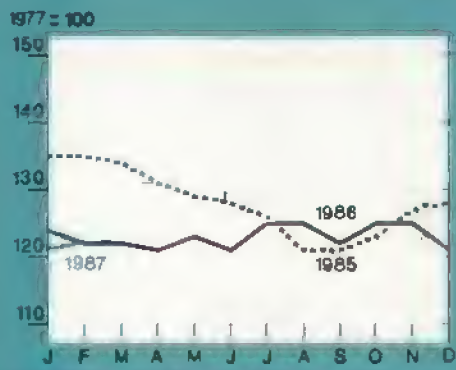
While these two extremes are unlikely, their consequences are severe enough to raise concerns about tendencies in this direction. Reducing the Federal deficit will certainly help defuse the current situation, and first steps have been taken in that direction. Until more of the current imbalances are corrected, agriculture will have to operate in a risky macroeconomic environment. [Ralph Monaco (202) 786-1283]

Prime Indicators of the U.S. Agricultural Economy

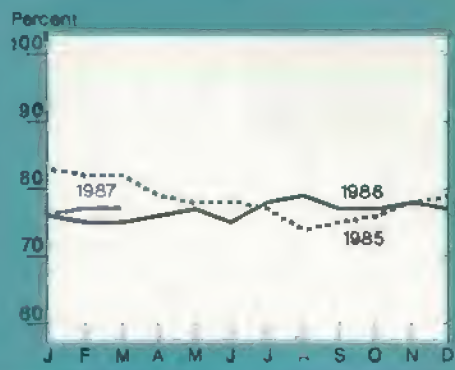
Index of prices paid by farmers¹



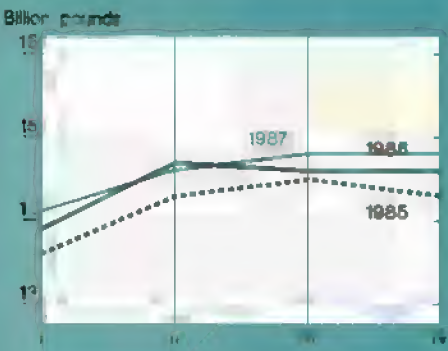
Index of prices received by farmers²



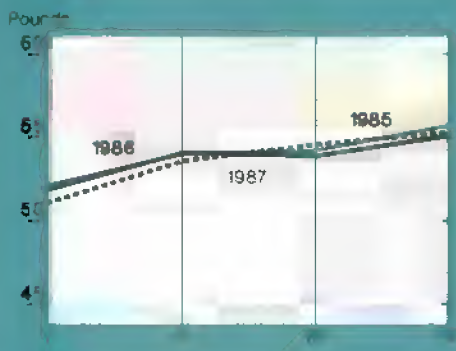
Ratio of prices received to prices paid



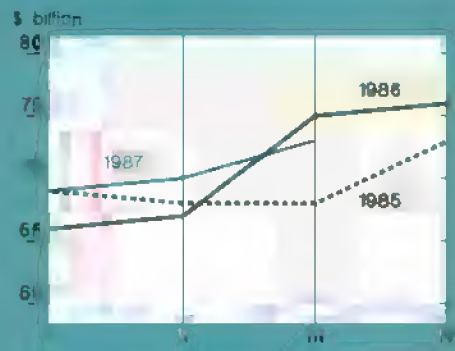
Red meat & poultry³ production



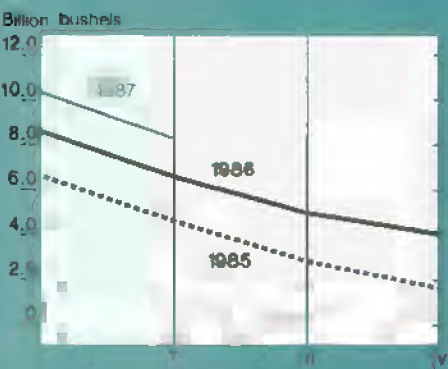
Red meat & poultry consumption, per capita^{3,4}



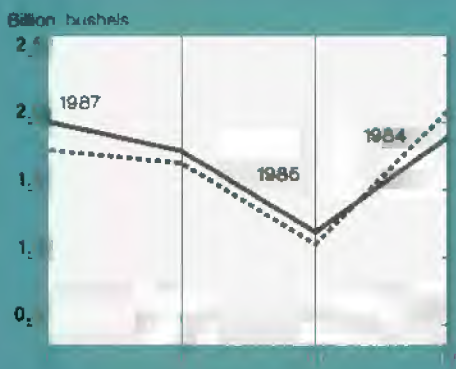
Cash receipts from livestock & products⁵



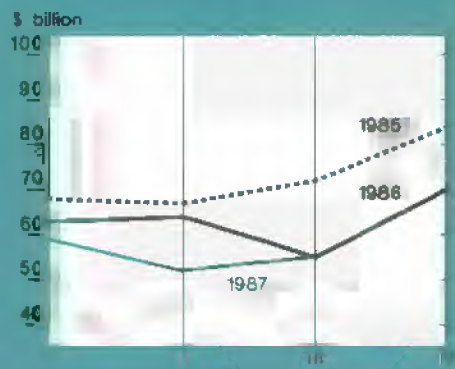
Corn beginning stocks⁶



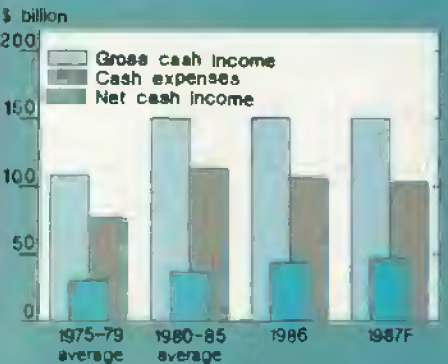
Corn disappearance⁶



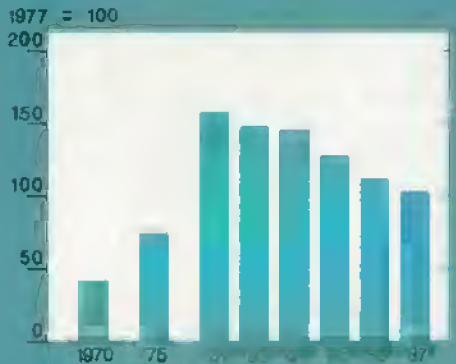
Cash receipts from crops⁶



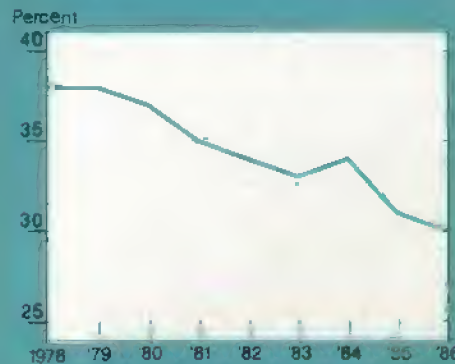
Farm net cash income



Farm real estate values



Farm value/retail food costs



¹For commodities and services, interest, taxes, and wages. Beginning in 1986, data are only available quarterly. ²For all farm products.
³Calendar quarters. Future quarters are forecasts for livestock, corn, and cash receipts. ⁴Retail weight. ⁵Seasonally adjusted annual rate.
⁶I=Dec-Feb; II=Mar-May; III=June-Aug; IV=Sept-Nov.

LIVESTOCK OVERVIEW

The red meat and poultry sectors continue to adjust to lower feed prices, leading to improved returns. Corn prices in mid-March averaged nearly 40 percent below a year earlier, and soybean prices were down 10 percent. Thanks to a record hay crop in 1986, hay prices in March averaged \$57.90 a ton, down nearly 15 percent from a year earlier. These lower input costs will help offset lower hog and poultry prices due to rising meat supplies.

Total meat supplies will likely approach record levels in second-half 1987 because of cyclical expansion of hog inventories and continued increases in poultry production. These increases will more than offset declining beef supplies, particularly in late 1987.

Hog Producers Expand Herd

The March 1 *Hogs and Pigs* report indicated that producers in the 10 quarterly reporting States expanded hog numbers on a year-over-year basis this winter, the first such increase since December 1983. The number of hogs kept for breeding totaled 5.23 million head, up 6 percent from a year earlier.

During December-February, the number of sows farrowing totaled 1.96 million head, up 5 percent from the preceding year. In December, producers indicated intentions of having about the same number of sows farrow during December-February as a year earlier. Producers' intentions now are to have 7 percent more sows farrow in March-August than a year ago.

The December-February pig crop was 6 percent larger than a year earlier, and pigs per litter—7.74—set a record for the quarter. The large September-November gilt retention, and further replacement of sows sold for capital gains tax benefits in December, suggest that the upward trend in pigs per litter may slow and perhaps plateau in 1987.

Based on the March 1 inventory of market hogs and projected live hog imports, commercial slaughter for all of 1987 may total about 82.5 million head, up 3 to 4 percent from 1986.

The average dressed weight may be about a pound higher than last year. So, pork production for the year may total about 14.6 billion pounds, up 4 percent from 1986.

Although hog prices at the 7 markets have dropped sharply from last summer, returns are still relatively high because of low feed costs. Prices for the year may average in the middle \$40's, after being in the high \$40's during the first half of the year. Reduced beef production and low pork stocks in storage will not completely offset the effects of rising poultry supplies.

Egg Prices Near Last Year

Egg prices are expected to be weak in May after the Easter holiday in April. Prices for cartoned Grade A large eggs in New York in the second quarter may average 59 to 63 cents per dozen, compared with 1986's 63 cents. Prices during the second half of 1987 may average below the year-earlier level if producers increase egg output slightly as expected.

During January and February, the number of eggs produced rose nearly 1 percent above a year earlier because of more layers. The rate of lay was nearly the same as last year. These trends are expected to continue during most of 1987. Lower feed costs are encouraging increased egg production, but the low returns that have occurred in the past when producers increased production are likely keeping the increase very modest.

Broiler Output Grows Again

The number of broiler eggs set and chicks placed thus far in 1987 continues to be well above last year. Output of young chicken meat from federally inspected plants in January and February was 6 percent above last year, and output is expected to be 7 percent above last year in the second quarter. Producers continue to order pullets for the hatchery supply flock, which will provide the basis for expanded production in the second half of 1987.

The 12-cities price for a composite of whole birds, including branded and without giblets, averaged 50 cents per

pound during first-quarter 1987, the same as in 1986. With smaller supplies and higher prices for red meats in the second quarter, prices for broilers are expected to average 50 to 54 cents per pound, about the same as last year.

The decline in the dollar relative to the Japanese yen has made U.S. products cheaper in Japan, and broiler exports to Japan are up. Also, the Export Enhancement Program is boosting exports to other purchasers. Thus, broiler exports in 1987 are expected to be greater than in 1986.

Turkey Production Record Likely

Turkey production appears headed for another record in 1987. Nevertheless, strong sales of whole turkey for holidays, plus everyday consumption of turkey parts and processed products, has kept prices relatively strong. Still, the increase in production during the second quarter will likely cause prices to average below 1986's 68 cents per pound.

Stocks of frozen turkey were larger than last year during the first 3 months of 1987. Most of the increase was in whole birds, probably for Easter sales. In late spring, cold storage stocks will likely begin to be rebuilt for fourth-quarter consumption. This will likely provide some price strength late in the second quarter.

Based on poulters placed that can be slaughtered in the second quarter, output of turkey meat from federally inspected plants may be 19 percent above last year. Since the rate of increase in output usually slows in the major hatching season for second-half production, production in second-half 1987 may be 12 to 14 percent above 1986.

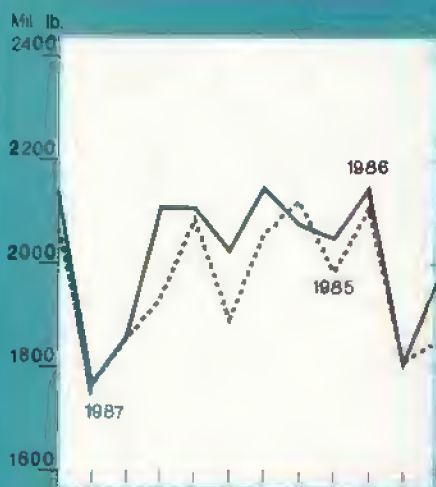
Beef Production Level

First-quarter beef production was near a year earlier. Commercial slaughter for the quarter was down modestly, as a 2-percent increase in steer and heifer slaughter almost offset a 12-percent decrease in cow slaughter. Average dressed weights were up about 1 percent from a year earlier.

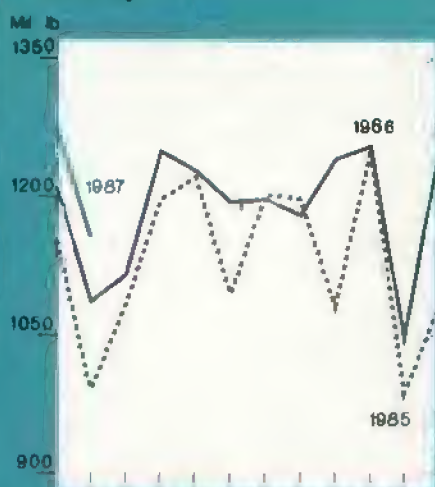
During 1987, the sharpest year-to-year declines in slaughter are likely to occur in the cow and nonfed steer and heifer classes. Fed steer and heifer slaughter is likely to remain near the larger year-earlier levels. As

Production of Livestock and Products

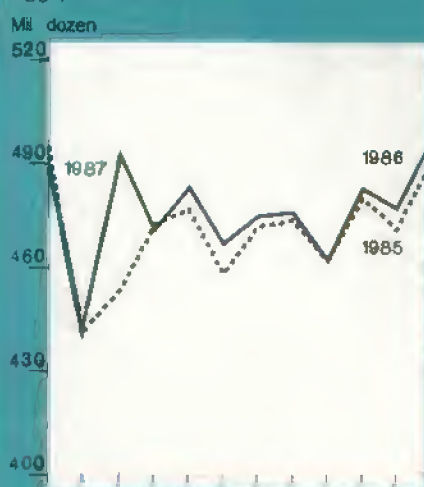
Commercial beef production



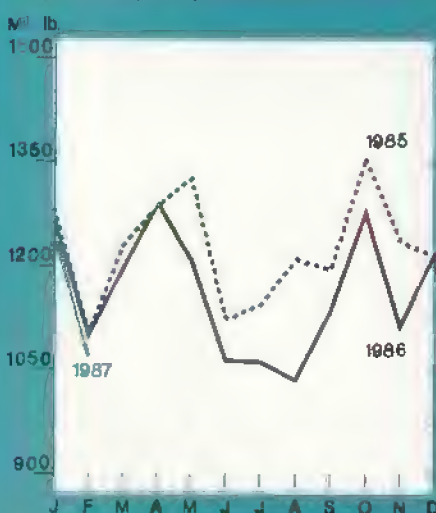
Broiler slaughter¹



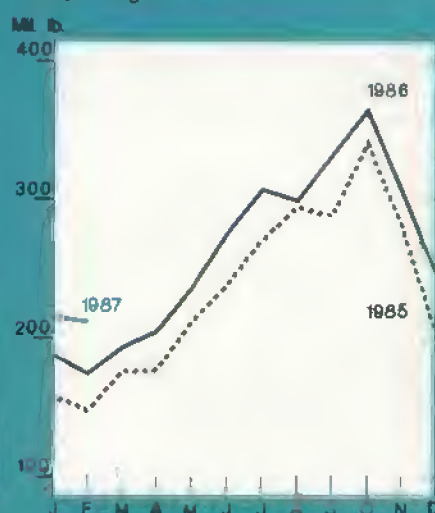
Egg production



Commercial pork production



Turkey slaughter¹



Milk production



¹Federally inspected slaughter, certified.

the fed steer and heifer proportion of slaughter rises, it will keep average slaughter weights relatively high, because steer and heifer dressed weights are about 200 and 110 pounds heavier, respectively, than cows. However, gains in slaughter weights will be held down by a willingness of cattle feeders to move fed cattle to market ahead of normal marketing schedules.

Live weights of fed steers and heifers slaughtered in the High Plains in March averaged 38 pounds below a year earlier. Late-March blizzards in the major cattle-feeding areas resulted in increased deaths and weight losses

among cattle on feed. Due to the storm, fed cattle marketings have slowed, pushing fed cattle prices up to \$70 per cwt. As weight gains normalize, marketings will get up to speed. However, prices will likely average in the middle to upper \$60's.

Commercial dressed slaughter weights for all types of cattle slaughtered averaged 623 to 629 pounds in 1982 to 1984-649 pounds in 1985 and 1986. Weights in first-quarter 1987, when feedlots were current, averaged 656 pounds. Weights for all of 1987 may average 652 to 654 pounds, assuming feedlot marketings remain current. Although this average is about 4 pounds above 1985, when overweight

feedlot cattle were a problem, the difference in 1987 is due to the shift in the slaughter mix.

Commercial Dairy Use Up

Commercial use of dairy products in 1986 reached a record 134 billion pounds, up 3 percent from 1985. First-quarter 1987 disappearance was also strong. Commercial use is expected to be up 1-3 percent in 1987, slightly less than in recent years as economic growth slows and the effects of dairy promotion on the rate of increase wane.

Commercial disappearance of butter in 1986 rose about 1 percent, while use of American cheese and other varieties posted increases over 6 percent. Sales of all fluid items in 1986 rose about 1 percent from a year earlier. Sales of lowfat and skim milk items increased almost 5 percent, while those of whole milk decreased about as much. Sales of frozen desserts gained about 2 percent, while sales of lowfat cottage cheese increased over 8 percent.

For further information, contact:
Ron Gustafson, cattle; Leland Southard, hogs; Allen Baker, poultry and eggs; and Sara Short, dairy; (202) 786-1830

FIELD CROP OVERVIEW

World production and supplies of most crops are record-high or near-record in 1986/87, despite smaller U.S. crops. Economic growth and lower prices are contributing to substantial gains in world consumption, but trade in most crops is showing only a weak recovery.

However, the combination of lower loan rates and Government trade programs, such as the Export Enhancement Program, is helping the United States recover lost shares of world markets. And the past several months have brought improved prospects for U.S. exports of feed grains, soybean meal, and soybean oil.

While foreign production rose in 1986/87, U.S. crop output dropped because acreage fell. Farmers' planting intentions point to continued reductions in U.S. program crop output for 1987/88. Reasons include heavy participation in all commodity programs and the Conservation Reserve Program, increases in the wheat acreage reduction (25 to 27.5 percent) and the feed grains acreage reduction (17.5 to 20 percent), and the voluntary 15-percent paid land diversion program for feed grains.

Total idled area is currently estimated between 69 and 74 million acres, including the 1987 programs and the Conservation Reserve Program (CRP). This total will approach 1983's record of 78 million acres. About 53 million acres will be idled by 1987's acreage reduction and diversion programs. The preliminary estimate for CRP enrollment through April is 19.5 million acres. In the first three signups, 8.9 million acres were enrolled but only 8.2 million were contracted.

U.S. Field Crop Acreage

Crop	Actual		Pro- spective		Change in 1987 from	
	1984	1985	1986	1987	1984	1986
-----Million acres-----						
-----Percent-----						
Food grains	82.04	78.09	74.43	67.17	-18.3	-9.8
Wheat	79.21	75.58	72.03	64.85	-18.1	-10.0
Winter	63.42	57.75	53.93	48.20	-24.0	-10.6
Durum	3.28	3.21	2.99	3.14	-4.3	4.8
Other spring	12.52	14.62	15.11	13.52	8.0	-10.6
Rice	2.83	2.51	2.40	2.32	-18.0	-3.4
Feed grains	122.16	128.16	119.76	106.10	-13.1	-11.4
Corn	80.54	83.45	76.67	67.56	-16.1	-11.9
Grain sorghum	17.25	18.29	15.32	11.84	-31.4	-22.7
Barley	11.96	13.16	13.06	11.03	-7.8	-15.5
Oats	12.41	13.26	14.71	15.67	26.3	6.6
Other						
Soybeans	67.76	63.13	61.48	56.89	-16.0	-7.5
Peanuts	1.56	1.49	1.57	1.61	3.2	2.5
Sunflowers	3.75	3.06	2.03	1.68	-55.2	-17.3
Cotton	11.15	10.68	10.06	10.35	-7.2	2.9
Upland	11.07	10.60	9.53	10.24	-7.5	2.9
Pima	0.08	0.084	0.111	0.113	37.5	1.8
Total	288.42	284.61	269.33	243.80	-15.5	-9.5

Area placed in the 10-year CRP program through April includes 4.5 million wheat acres; 2.5 million corn; 3.0 million sorghum, barley, and oats; 2.2 million soybean; and 700,000 cotton. Of the total CRP area, 20 percent is located in the Mountain region, 34 percent in the Plains, and 17 percent in the Corn Belt. Only 8 percent is located in the Delta and Southeast.

Farmers Intend To Plant Less Wheat

Worldwide, a record wheat crop of 529 million tons and a near-record 318-million-ton rice crop mean very large carryouts this season. While world wheat consumption is up more than 6 percent, the largest gain in a decade, ending stocks will swell 9 percent to a record 149 million tons. March 1 U.S. wheat stocks were 2.25 billion bushels, about the same as in 1986. About 65 percent of this was stored off-farm.

U.S. farmers planted 48.2 million acres of winter wheat last fall, about 11 percent below a year earlier. Besides heavy participation in the 1987 wheat program, wet fields reduced plantings in some major areas.

Although farmers reported that they intend to seed 5 percent more acres to Durum wheat this spring, area of other spring wheat is expected to fall 11

percent to 13.5 million acres. Total wheat plantings could be the lowest since 1973. Participation in the rice program will remain nearly universal, and planting intentions are reported to be 2.32 million acres, 3.4 percent below plantings in 1986.

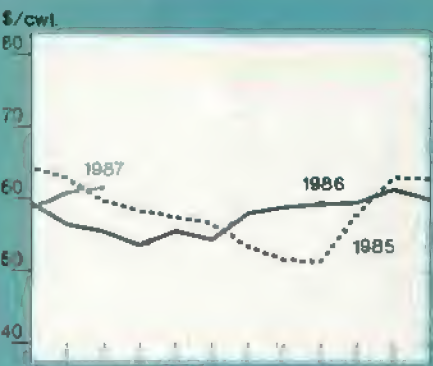
Domestic supply and demand for wheat and rice have changed little in recent weeks. U.S. wheat exports during 1986/87 are expected to be 1.03 billion bushels, the second smallest total in the last decade. Rice exports, with the marketing loan lowering domestic prices to world levels, are forecast to rise 36 percent to 80 million cwt.

Generic certificate exchanges for wheat have picked up during the March-May quarter. Certificates were exchanged for 88 million bushels of wheat in the fall quarter and 70 million in the winter quarter.

Through April 8, certificates have been exchanged for 39 million bushels of wheat, well above the corresponding rate during the three preceding quarters. About 80 percent of the wheat has been exchanged from loans. Certificate exchanges for wheat are anticipated to rise further later in the quarter as farmers make room for the new crop.

Commodity Market Prices

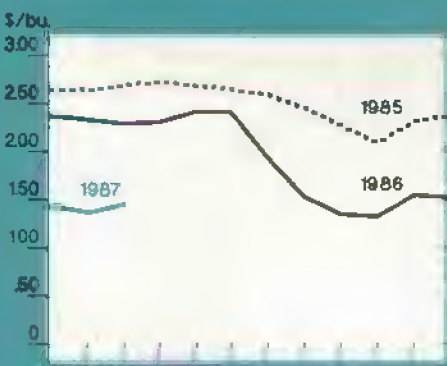
Choice steers, Omaha



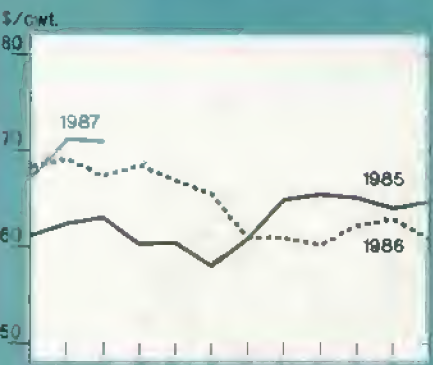
Broilers, 12-city average



Corn, Chicago³



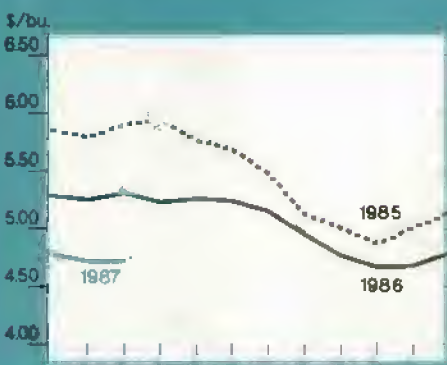
Feeder cattle, Kansas City¹



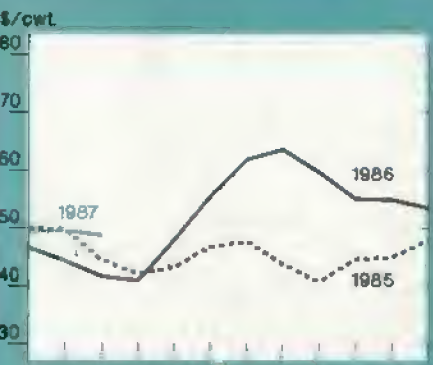
Eggs, New York²



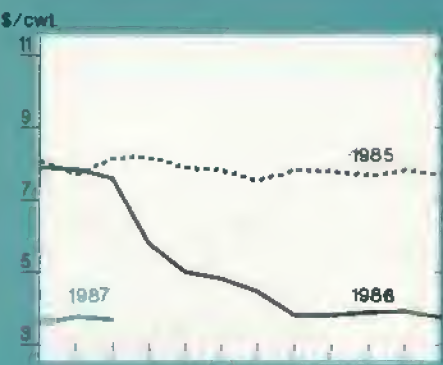
Soybeans, Chicago⁴



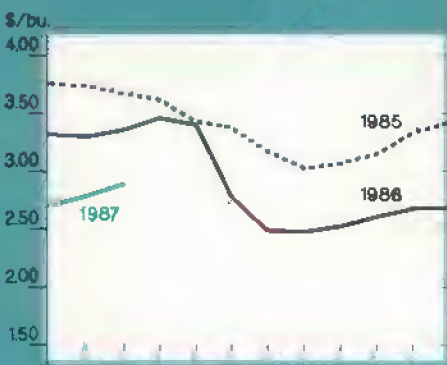
Barrows and gilts, 7 markets



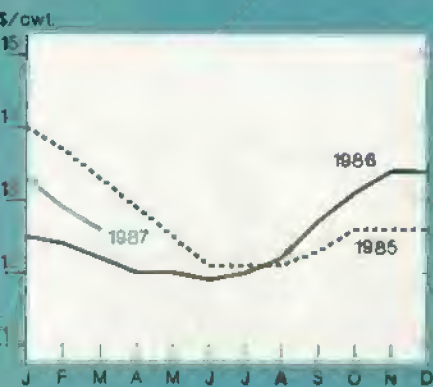
Rice (rough), SW Louisiana



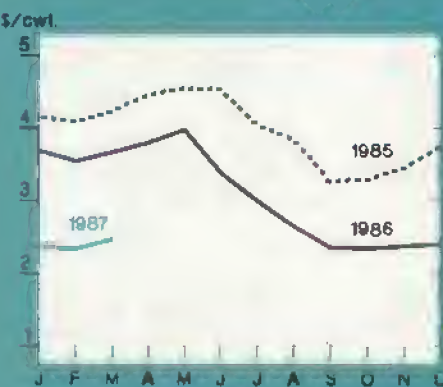
Wheat, Kansas City⁵



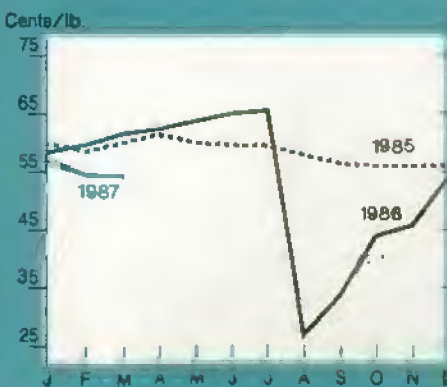
All milk



Sorghum, Kansas City



Cotton, average spot market



¹600-700 lbs., medium no. 2. ²Grade A Large. ³No. 1 Yellow. ⁴No. 2 Yellow. ⁵No. 1 HRW.

Corn Exports To Rise, Plantings To Fall

Record 1986/87 foreign production of feed grains is nearly offsetting an 8-percent drop in U.S. output, and global production of 835 million tons is down only 1 percent from last year's record. While consumption is projected to rise over 3 percent to 796 million tons, world ending stocks will increase by more than 20 percent. World corn stocks will be up by 26 percent.

Projected world feed grain trade of 86 million tons is up 2.5 percent from last year, and prospects for U.S. exports have improved significantly over the last several months. In February, a 9-percent annual decline was forecast for U.S. corn exports in 1986/87. Currently, a 13-percent increase is anticipated.

U.S. corn sales to Japan, Korea, and the USSR have picked up, and total corn exports for the season now are expected to reach 1,375 million bushels, 134 million above last year. Poorer prospects for Argentina's and South Africa's crops and uncertainty about China's exportable supplies have helped U.S. export prospects.

March 1 cattle and hog inventories remained low by historical standards, but the hogs and pigs inventory increased from a year earlier, the first year-over-year increase reported since December 1983. Together with an expected 8-percent increase in poultry output, the gain was enough to raise the domestic corn feed consumption estimate for 1986/87 to 4.5 billion bushels, up 200 million from a month earlier and a 10-percent increase from 1985/86.

In spite of improved export prospects for corn, grain sorghum, and barley, the domestic supply-demand imbalance for feed grains will continue for the foreseeable future. March 1 corn stocks were a record 8.25 billion bushels, 25 percent above a year earlier. About 61 percent of this corn was stored on farms, most as collateral for CCC loans.

Corn carryout this crop year is expected to total 5.24 billion bushels, 30 percent above 1985/86 and equivalent to 74 percent of annual use. Carryout for grain sorghum also is expected to

Cumulative Generic Certificate Exchanges as of April 8, 1987

Commodity	CCC Inventory	Producer loans	Total
Food grains			
Wheat			
Volume (mil. bu.)	60.0	233.8	293.8
Value (\$ mil.)	144.5	563.1	707.6
Rice			
Volume (mil. cwt.)	26.5	0.03	26.5
Value (\$ mil.)	88.6	0.11	88.7
Feed grains			
Corn			
Volume (mil. bu.)	90.1	1,848.7	1,938.8
Value (\$ mil.)	145.3	2,981.6	3,126.9
Grain sorghum			
Volume (mil. bu.)	28.5	91.9	120.4
Value (\$ mil.)	50.6	163.1	213.7
Barley			
Volume (mil. bu.)	30.3	78.7	109.0
Value (\$ mil.)	38.4	99.6	138.0
Rye, oats, and soybeans			
Value (\$ mil.)	7.7	18.8	26.5
Total value (\$ mil.)*	475.0	3,826.3	4,301.4

*Not included are about 5.14 million bales of cotton exchanged from 9-month loan positions; no corresponding values are available for the cotton. Other program commodities, for which few or no exchanges have been made, include honey, nonfat dry milk, butter, and cheese.

Source: Agricultural Stabilization and Conservation Service, USDA.

rise, up 25 percent to 688 million bushels. But, barley carryout should fall slightly with a large rise in exports, and oat carryout will drop 40 percent because of significantly lower output.

Use of generic certificates during March-May continues to free a substantial amount of corn from Government control, keeping free stocks abundant and cash prices lower than they would be otherwise. In December-February, certificates were exchanged for 751 million bushels of corn. Through April 8, certificates were exchanged for an additional 592 million bushels, virtually all from 9-month loans. In May, corn exchanges are expected to taper off, as placement of 1986 corn under loan subsidies.

Significantly lower feed grain plantings this season should alleviate the supply/demand imbalance somewhat in 1987/88. Farmers intend to plant 67.6 million acres of corn this spring, 12 percent below 1986. Corn intentions in the Corn Belt ranged from 86 percent of 1986 plantings in Missouri to 92 percent in Ohio. Grain sorghum and barley plantings also should be down sharply, particularly in the Plains.

Generic Certificate Issuances

	Issuance	Value
		\$ million
ACTUAL		
(April-December 1986)		
Deficiency & diversion payments		3,609
Other		238
Total		3,847
AUTHORIZED		
(January-August 1987)		
1986 final deficiency payments for corn & grain sorghum		300
1987 advance deficiency payments		2,300
1987 advance diversion payments		500
1987 Cons. Reserve Program corn bonus payments		340
Export Enhance. & Targeted Export Assistance Programs		500
Disaster payments		400
Total		4,340
Total, actual & authorized 8,187		

Oat planting intentions, however, are about 7 percent above plantings last season, at 15.7 million acres. Oats enjoy a stronger market than other feed grains, and also are being used as a cover crop on some idled acres.

Soybean Stocks Remain High; Plantings To Fall Sharply

Record crops of soybeans, peanuts, and rapeseed will mean that 1986/87 world oilseed output is close to the 1985/86 record of 196 million tons. World soybean crush is projected to rise 5 percent, and soybean trade will increase by nearly 2 percent. But U.S. exports will drop 5 percent as larger supplies become available from South America.

With record supplies of oilseeds both here and abroad dampening increases in domestic crush and world trade, the soybean loan rate likely will continue supporting domestic prices. March 1 soybean stocks were 1.38 billion bushels, slightly higher than a year earlier.

In response to the prospect of higher net returns to other crops and the placement of acreage into the Conservation Reserve, U.S. farmers intend to plant only 56.9 million acres of soybeans this spring, 7.5 percent below 1986 and the smallest plantings since 1976.

In the North Central region, intentions by State are 89 to 100 percent of last season's plantings, except in Ohio, South Dakota, and Wisconsin where intentions show plantings rising. Intentions in the Southern States indicate proportionally much greater reductions in plantings.

Peanut supplies for 1986/87 total 4.5 billion pounds: 845 million of carryover, 2 million of imports, and 3.7 billion of production. Peanut exports have risen annually since 1980, but increases have slowed recently. USDA established a \$4.5-million Targeted Export Assistance program to boost peanuts' export potential in Western Europe. However, U.S. peanut exports are facing increased competition from China and Argentina.

The *Prospective Plantings* report indicates that farmers intend to plant 1.61 million acres of peanuts this spring. This area would be about 2.5 percent above last year and the highest since 1958. Modest increases are expected in all major producing States except Florida and Oklahoma.

Cotton Plantings To Rise This Spring

The combination of a 5-percent gain in 1986/87 cotton consumption and a 12-percent drop in world production has reversed the cotton price decline that occurred at the beginning of 1986/87. U.S. exports for the year are expected to be 6.7 million bales, 4.7 million above last year.

Carryover will remain large by historical standards, but a reassessment of China's cotton consumption this year and last has caused a sharp downward revision in the forecast of 1986/87 world carryout stocks. The adjusted world price announced by USDA has been above 50 cents per pound for several months, and has remained well above the loan repayment rate (44 cents per pound for base quality) since December 12, 1986.

Primarily because of a stronger market outlook, participation in the 1987 cotton program should fall from last year, and farmers intend to plant 10.35 million acres of cotton this spring, about 3 percent more than last year. (Michael Hanthorn (202) 786-1840 and Frederic Surls (202) 786-1691)

For further information, contact: Sara Schwartz, world food grains; Allen Scheinbein, domestic wheat; Janet Livezey, rice; Peter Riley, world feed grains; David Hull, domestic feed grains; Tom Bickerton, world oilseeds; Roger Hoskin, domestic oilseeds; Carolyn Whitton, world cotton; Bob Skinner, domestic cotton; Jim Schaub, peanuts. World information, (202) 786-1691; domestic, (202) 786-1840.

HIGH-VALUE CROP OVERVIEW

Florida's orange juice pack could be 14 percent larger than last season because of a bigger crop and higher yields. Spring area for 7 fresh-market vegetables is estimated up 8 percent from 1986. Tobacco growers plan to grow 2 percent more tobacco in 1987, because of larger effective quotas.

FCOJ Production Up

Florida's 1986/87 pack of frozen concentrated orange juice (FCOJ) could total 150 million gallons, compared with 132 million last season. USDA's

April 1 yield projection was 1.50 gallons per box (42 degree Brix), compared with 1.38 last season. The April 1 orange crop estimate is 123 million boxes, up 3 percent from last year.

Despite more production and larger imports, FCOJ prices this season are higher than in 1986. In March, Florida f.o.b. prices rose from \$4.34 a dozen 6-ounce cans to \$4.46. The price was \$3.84 a year ago.

California Strawberry Acreage Higher

California's strawberry area for harvest this spring likely totals 16,000 acres, 3 percent above last year and 10 percent more than 1985. Although the early harvest was delayed by cold weather during January and February, the spring crop appears in good condition.

The USDA's March 1 estimate of winter potato production for 1987 indicated a 9-percent drop from 1986, to 126 million cwt. Planted area for spring harvest rose 2 percent to 32,000 acres, but it still was 14 percent below 2 years ago.

Potato growers' prices for the first 2 months of 1987 rose 45 percent over 1986, to \$4.85 per cwt. Smaller stocks and expected strong export demand for fresh potatoes should keep prices above last year throughout the spring.

Spring Vegetable Area Bigger

The area of 7 fresh-market vegetables in major production States during the spring is forecast at 170,000 acres, up 8 percent from 1986. Increased acreage of broccoli, cauliflower, sweet corn, and lettuce more than offset declines in carrots, celery, and tomatoes.

March 1 contract intentions for 5 major processing vegetables indicate growers expect to plant 1 percent more area than last year, but 8 percent less than 2 years ago. Area planted to snap beans should be up 3 percent, with sweet corn and green peas up 4 percent each. Acreage in processing tomatoes should be down 4 percent, and in cucumbers for pickles down 10 percent.

Corn Sweetener Prices Lower

In the Chicago-West market, HFCS-42 prices strengthened slightly and HFCS-55 prices remained steady in 1986, but may weaken in 1987. Starch costs faced by HFCS producers are expected to remain near the lows recorded in fourth-quarter 1986. Market growth for all corn sweeteners has slowed. Consumption grew 2.6 percent in 1986 and is likely to grow only 2 percent in 1987. In addition, rising HFCS imports from Canada are forcing producers to lower prices to maintain or expand market share.

Prospective plantings of sugarbeets in 1987 indicate an increase of 1.3 percent above 1986, to 1.249 million acres. That could raise beet sugar production above 1986/87's estimated 3.33 million tons, raw value, and add downward pressure to the U.S. sugar import quota.

Tobacco Acreage Up in 1987

Tobacco growers plan to set 2 percent more tobacco in 1987 than in 1986. Their planting intentions partly reflect 7-percent-higher effective marketing quotas this year for both flue-cured and burley tobacco. However, large on-farm holdings of 1986 burley, plus cuts in acreage allotments of Kentucky-Tennessee dark fire-cured (down 40 percent) and dark air-cured (down 35), will curb planting of these types.

With normal yields, this year's production will likely exceed the 1986 crop by about 4 percent. Nevertheless, the total supply will be lower in 1987/88 because beginning stocks will be smaller. Stocks will probably decline again in 1987.

The flue-cured price support is down 0.3 cents per pound in 1987. The burley support is unchanged, while supports for other types are also declining slightly.

USDA set the 1987 basic burley marketing quota at 464 million pounds, 6 percent below last year. The effective quota, which reflects the basic quota adjusted for the previous year's over- and under-marketings, totals about 520 million pounds, 32 million above last season.

For further information, contact: Ben Huang, fruit; Shannon Reid Hamm, vegetables; Dave Harvey, sweeteners; Verner Grise, tobacco; (202) 786-1767.

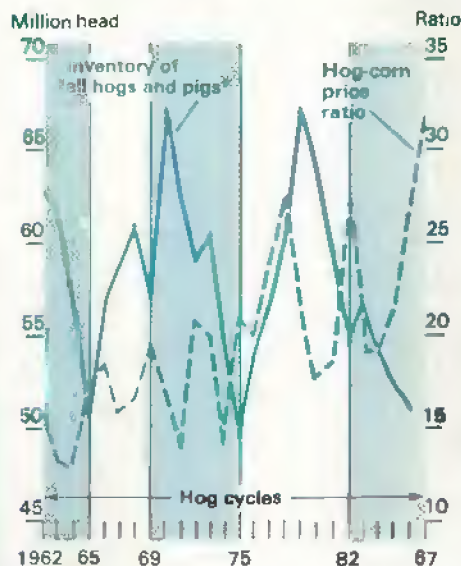


Commodity Spotlights

Is Expansion Coming In the Hog Industry?

The March *Hogs and Pigs* report indicated that producers are expanding their breeding herds and planning to increase production in the coming months. The expansion is in response to record high hog-corn price ratios and high returns to producers over total costs since mid-1986. The question now is, how fast will production increase? The rate is uncertain because of structural changes in the industry.

Hog-Corn Price Ratio Indicates Future Expansion



*As of December 1 of each year.
1987 estimated

Before 1970, hog production rose and fell, according to the relative prices of hogs and corn, in cycles that ran about 4 years. Corn was the largest production expense. When corn prices were low, more corn was fed to hogs. When corn was high, it was sold for cash.

However, from 1969 to 1978, the number of farms with hogs declined 26 percent, and the average number of hogs per farm rose 45 percent. As hog production shifted from pasture to expensive confinement systems, corn prices became less important and capital costs more so.

The transition began in 1975, when corn prices were low and hog prices were nearly \$14 per cwt higher than the year before. Producers began expanding in 1975 and continued until 1979. In 1976, the pig crop was 18 percent above 1975. However, the pig crop rose only 2 percent and 5 percent in 1977 and 1978, respectively. Given the low corn prices, these increases were modest.

The hog-corn ratio rose to 20-to-1 and above during 1977 and 1978, and producers covered total costs. Thus, it appeared that producers were responding very little to the favorable ratio. Actually, a heavy expansion was in the making for 1978 and 1979. The response was not as quick as in former years because of the structural shift.

Confinement Construction Boom Began in 1975

In past years, expansion could come about simply by each producer's breeding a few more sows. In the late seventies, the cycle took longer because producers built farrowing houses and other confinement facilities to boost production. Nearly two-fifths of farrowing houses available in 1980 were either built or renovated during 1975-80, indicating a flurry of confinement construction.

The 17-percent expansion in 1979 pushed hog prices down sharply late that year, at the same time that corn prices rose. The ensuing liquidation of hog inventories continued in 1980 with a record slaughter, exceeding 96 million head. In addition, a drought in 1980 boosted grain prices further.

Thus, hog prices hit new highs in 1982, just as a record 1982 corn crop dropped corn prices. Hog-corn ratios

reached a record high in late summer 1982, giving producers very favorable returns. They responded quickly this time by retaining gilts, and by March-May 1983, the number of sows farrowing rose 15 percent above a year earlier.

But in 1983, PIK and drought reduced grain stocks. Corn prices increased and hog prices fell sharply, partly from herd liquidation. Producers received no strong signals to cease liquidation until mid-1986. On a year-over-year basis, the number of sows farrowing has dropped each year since 1983.

Will Repairs, Finances Constrain Expansion?

Producers' expansion has so far been constrained by:

- **Financial stress.** The industry responded quickly in 1982 and early 1983 because it had built up a large capacity and was waiting for the economic signal to go. Memories of the good days in the middle and late 1970's were fresh in producers' minds. Since then, low returns and financial stress, especially in the Corn Belt, have weakened many producers' financial positions.
- **Condition of facilities.** Normally, in periods of tight money, maintenance is postponed and facilities are idled. Farmers may be using their 1985-86 earnings to catch up. So, the response to the high hog-corn ratio may just be delayed. Some people may be considering the purchase or lease of idle facilities for hog production.

There are signs of expansion:

- As of March 1, producers in the 10 quarterly reporting States indicated intentions to have 7 percent more sows farrow in March-May than a year earlier. During December-February, they farrowed 5 percent more sows than a year earlier, the first quarter without a decline since June-August 1983. Producers also plan to increase the number of sows farrowing in June-August by 8 percent.

- The number of gilts retained between September 1 and December 1 rose significantly. During this period, producers in the quarterly reporting States added 315,000 head to the breeding inventory. September-November gilt retention as a percentage of the September breeding inventory was the largest since 1978.

Although hog prices are expected to average less in 1987 than in 1986, producers will have relatively good returns if feed costs remain low. In past cycles, returns of the magnitude of the last 6 to 8 months would have triggered a double-digit increase in the pig crop by the March-May quarter. However, producers indicated they are taking a more cautious approach this time.

To bring facilities on line, larger producers need time to plan, raise capital, build, and hire help. Thus, this expansion may be slower but longer than in previous cycles. But once facilities are in place, larger producers with lower production costs will continue to produce near capacity as long as returns exceed cash costs, even if they fall below total costs. This could result in a more modest contraction than usual when the expansion ends. [Leland Southard (202) 786-1830]

How Exchange Rates Affect U.S. Pork Trade

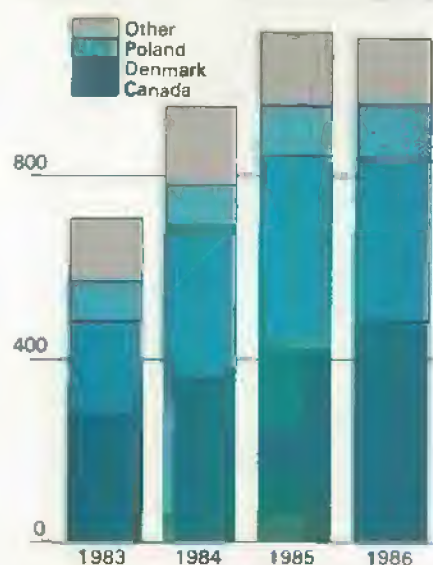
During 1986, U.S. pork production dropped 5 percent while the barrow and gilt price at the 7 markets averaged 14 percent above 1985. This domestic price rise might have led to higher imports, but the decline in the value of the dollar caused U.S. imports of pork to decrease slightly in 1986. The largest drop was in Danish pork shipments, which fell 16 percent.

The average U.S. barrow and gilt price converted to Danish kroner peaked in 1984, about the same time as U.S. imports of Danish pork increased. Then, in early 1985, the dollar began to weaken and the EC cut subsidies on pork exported to the United States.

U.S. imports of Danish pork have dropped ever since. Even the sharp rise in U.S. hog prices in 1986 was largely offset by changes in the dollar/kroner exchange rate. Although

U.S. Bought Less Danish Pork In '86

Million pounds carcass weight
1200



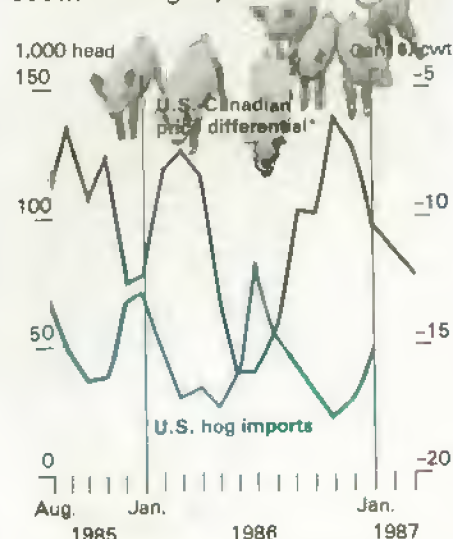
restitutions for pork exports to the United States were increased in July 1986, they are not expected to have a large impact on Danish exports this year.

Canada Selling Fewer Live Hogs To United States

U.S. imports of pork from Canada have continued to increase, but live hog imports have dropped. In 1984, the Canadian dollar weakened against the U.S. dollar and the exchange-rate-weighted differential between Canadian and U.S. hog prices widened, increasing the attractiveness of exporting to the United States. U.S. imports of live hogs from Canada jumped to 1.3 million hogs, up from .4 million in 1983. In August 1985, a countervailing duty was placed on imports of Canadian live hogs, and during 1986 U.S. imports of live hogs reached only 0.5 million head, down from 1.2 million in 1985.

For 1987, U.S. imports of pork and live hogs are forecast to be below last year. Imports of pork from Canada—which do not face countervailing duties—are expected to rise, but imports from Denmark are not. Although the differential between U.S. and Canadian hog prices is currently widening, some strengthening of the

Wider U.S.-Canadian Price Difference Boosts U.S. Hog Imports



*A negative difference means U.S. prices are higher.

Canadian dollar is forecast for 1987, and a slowdown in hog imports is expected in late 1987, putting 1987's imports slightly below 1986's.

U.S. Pork Exports Fell in '86

U.S. exports of pork fell in 1986, mainly because of a drop in shipments to Mexico and the EC. Mexico's imports of U.S. pork were hard hit by the country's economic troubles. Pork consumption in Mexico varies considerably as prices change, and the weakening peso, inflation over 100 percent, and higher U.S. hog prices have boosted prices paid in Mexico. Declining consumer purchasing power in 1986 also limited Mexico's pork consumption. Even the low-value pork cuts normally bought by Mexico proved to be too expensive.

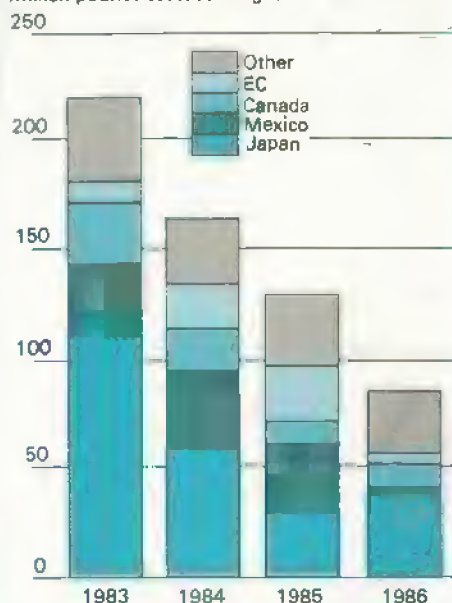
Hog inventories in the EC continue to grow, although reduced profitability should dampen pork production expansion this year. Pork and competing meats are plentiful in the EC, and demand for imports has been low.

Strong Yen Boosted U.S. Pork Sales to Japan

U.S. pork exports to Japan increased 32 percent in 1986, mainly because of the strong yen. Denmark and Taiwan together supplied about 75 percent of Japan's pork imports, and Canada and the United States each supplied about 10 percent. In 1984, the yen strengthened against the Danish

U.S. Pork Sales to Japan Back Up in '86

Million pounds carcass weight



krone but weakened against the dollar, and Japanese imports of Danish pork almost doubled, while imports from the United States and Canada were slashed.

With the fall of the dollar in 1986, U.S. pork exports began to rise to Japan. However, surplus pork supplies persist in Taiwan, and that country will grow as a competitor in the Japanese market.

For 1987, U.S. pork exports are likely to increase over last year. Some moderation in U.S. hog prices is expected at the end of the year, but the big boost to exports could come from relative movements in exchange rates. Exports to Japan are forecast to continue to increase with the further strengthening of the yen. Little or no recovery in exports is likely to Mexico or the EC. [Linda M. Bailey (202) 786-1691]

Expected Soy-Corn Returns Indicate Soybean Acreage

U.S. soybean plantings have declined since 1979, especially in the Southeast and Delta. Reasons include higher expected returns to cotton production, less double cropping, greater sorghum plantings, and the hot, dry weather in the Southeast during 1985 and 1986, which discouraged a second crop on some doubled-cropped acreage. In the North Central region, increased Government payments to corn producers explain most of the decline.

About two-thirds of U.S. soybean acreage is in the North Central region (Corn Belt, Lake States, Northern Plains, and Kansas), where corn and soybeans are grown primarily as competing crops or in rotation. Consequently, soybean-corn price ratios have been assumed to reflect farmers' expectations for returns at harvest.

For the North Central region, a 10-percent annual change in a ratio of futures prices¹ (caused by a change in the soybean price, a change in the corn price, or both) leads to a 6-percent change in the same direction in soybean plantings. A 10-percent change in the ratio of lagged season average prices² leads to a 4.8-percent change in soybean acreage. During 1974-86, the ratio of futures prices averaged 2.35 (0.26 standard deviation) and the lagged season average price ratio averaged 2.43 (0.37 standard deviation).

The futures price ratio has increased since 1985, and the lagged season average price ratio has increased since 1986, suggesting that soybean plantings should be rising also. However, just the opposite has occurred. National soybean plantings peaked at 71.4 million acres in 1979 and fell to 61.5 million in 1986. USDA's *Prospective Plantings* report indicated farmers intend to plant only 56.9 million acres in 1987. This would be the smallest soybean area since 1976.

One reason the price ratios are not correctly indicating the direction of change in soybean acreage is that during the 1980's an increasing share of farmers' revenues for corn relative to soybeans has come from Government program payments. Also, corn yields rose an average 3.15 bushels a year during 1969-86, while soybean yields rose only 0.46 bushel per year. Consequently, a ratio of soybean and corn expected net returns more fully reflects farmers' choices when making planting decisions than do early-season price ratios.

Therefore, a ratio of expected net returns was computed for the North Central region and used to estimate

¹ The average May value of the November soybean futures divided by the average May value of the December corn futures. ² The previous year's season average price for soybeans divided by the previous year's price for corn.

North Central Soybean Acreage Response Equation Estimates 1/

Item	Net expected returns	Futures prices	Lagged season average prices
Elasticity estimate	0.28	0.60	0.48
T-statistic	2.64	4.75	5.10
Adjusted R ²	0.72	0.86	0.87
D.W. statistic	1.75	2.28	1.97

1/ Analyzed data are for 1974-86.

Expected Corn and Soybean Returns 1/

Crop, Item	1974	1987
CORN		
A. Base acres	100	100
B. Set aside rate (%)	0	20
C. Diversion rate (%)	0	15
D. Planted acres	100	65
E. Target price	\$1.38	\$3.03
F. Dec. futures price in May 2/	\$2.30	\$1.63
G. Loan rate	\$1.10	\$1.82
H. Per bu. diversion payment	--	\$2.00
I. Program yield (bu.)	97	107
J. Trend yield (bu.)	87.5	134.5
K. Gross revenue		
1974 $(D \times F \times J)$	\$20,125	--
1987 $((D \times G \times J) + (D \times (E - G) \times I) + ((A \times (C / 100)) \times H \times I))$	--	\$27,537
L. Per acre variable production costs	\$62.45	\$114.11
M. Variable costs $(D \times L)$	\$6,245	\$8,053
N. Net revenue $(K - M)$	\$13,880	\$19,483
SOYBEANS		
O. Planted acres	100	100
P. November futures price in May 2/	\$5.11	\$4.52
Q. Loan rate	\$2.25	\$4.77
R. Trend yield (bu.)	30.6	36.6
S. Gross revenue		
1974 $(O \times P \times R)$	\$15,637	--
1987 $(O \times Q \times R)$	--	\$17,458
T. Per acre variable production costs	\$27.48	\$50.20
U. Variable costs $(O \times T)$	\$2,748	\$5,020
V. Net revenue $(S - U)$	\$12,889	\$12,438
Soybean-corn net revenue ratio (V / N)	0.93	0.64
Break-even soybean price $((K - M + U) / (O \times R))$	\$5.43	\$6.69

1/ Returns expected at planting time, on 100 acres in North Central region. 2/ Futures prices are reduced by 10 cents for corn and 30 cents for soybeans, to account for harvest-time differences between futures and farm prices.

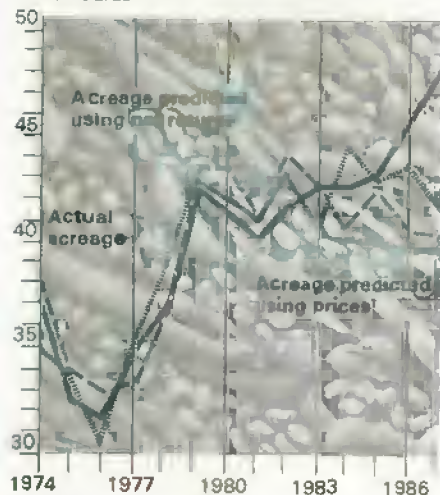
soybean plantings. The ratio of expected net returns for soybeans and corn reflects North Central farmers' expectations at the planting time for current-year returns. Expectations are based on corn program provisions, May average futures prices for soybeans (November contract) and corn (December contract), trend yields, and production costs.³

³ For 1987, March average futures prices were used.

In most years, expected corn revenues include deficiency payments plus revenues expected from either marketing the crop or placing it under loan. In years when diversion programs were implemented, these payments are included as revenue. And, in 1983, PIK payments are included as corn revenues. For 1974-86, soybean revenues include expected revenues from selling the crop, while this year's expected revenues are assumed to come from placing the crop under loan.

Soybean Acreage Following Net Returns, Not Prices

Million acres

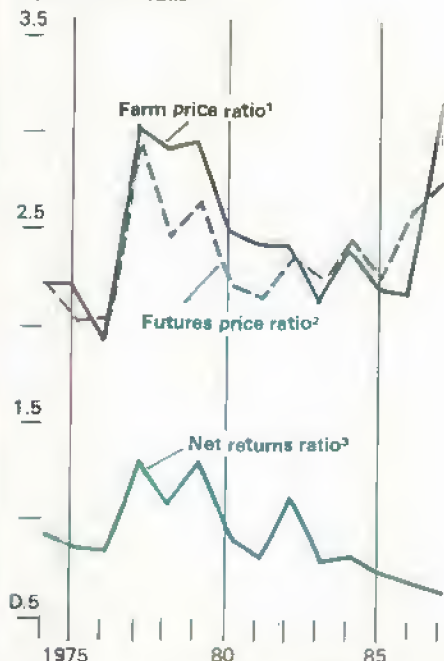


¹ Prediction based on November soybean-December corn ratios as of May.

² Prediction based on soybean-corn ratios of net returns.

Soybean-Corn Net Returns Ratio Falls, Despite Higher Price Ratios

Soybean/corn ratio



¹ Ratio of soybean to corn farm prices, lagged 1 year.

² Ratio of November soybean futures to December corn futures as of May.

³ Ratio of soybean gross receipts minus variable costs to corn, in the North Central region.

Since 1974, a 10-percent change in the soybean-corn expected returns ratio has led to a 2.8-percent change in the same direction in North Central soybean plantings. Soybean plantings in 1987, based on the expected net returns ratio, are estimated to be 40.4 million acres, 3.5 percent below the official USDA planting intentions estimate of 41.9 million in the North Central region. Estimates from the futures and lagged season average price ratios, however, are substantially above the official intentions estimate, at 48.7 and 50.4 million acres, respectively.

The estimates for expected net returns for soybeans and corn show that the price at which North Central farmers would be indifferent between planting soybeans or corn has been well above the May average November futures price since 1980, except for 1982. In 1980, expected soybean prices were about 50 cents a bushel below the price needed to be equally inclined to plant corn or soybeans. For 1987, bean prices may be about \$1.90 below that price, as Government benefits for corn producers become even more important with the 15-percent paid diversion. *[Michael Hanthorn and Larry Van Meir (202) 786-1840]*

Electronic Markets Enhance Efficiency

Agricultural products are usually marketed in face-to-face exchanges between buyers and sellers. But, sales can also be made using computers, teletype, conference calls, and videos. An electronic market is a comprehensive system which uses one of these technologies and is accessible to all market participants. By eliminating the need for expensive face-to-face meetings, electronic marketing allows more traders and less traditional supply sources to participate, improving competition.

The first electronic marketing system was developed about 25 years ago to sell slaughter hogs in Virginia. Two other systems were developed between the middle 1960's and the 1970's. One worked through a Missouri livestock cooperative to sell feeder pigs via conference telephone systems. The other was a computerized network, TELCOT, run by the Plains Cotton Cooperative Association of Texas to auction cotton. TELCOT remains active today.

USDA Is Funding Projects

In 1978, USDA began partially funding electronic marketing projects to assess their feasibility. Three agencies within USDA have been involved. The Agricultural Marketing Service (AMS) sponsors pilot research projects, the Cooperative Extension Service provides educational programs, and the Packers and Stockyards Administration monitors the electronic marketing of livestock.

Since 1978, USDA has partially funded 14 electronic marketing projects through the Federal-State Marketing Improvement programs. These projects developed computer-based systems either for buying and selling products or for providing information.

Of the 14 initial projects, 11 systems were developed. But, only four of these 11 (NEMA, ECI, Florida, and New Jersey) developed into viable electronic markets.

One of the four was developed as an electronic market for gradable eggs. The Egg Clearinghouse, Incorporated (ECI) supplanted an earlier pricing system established through a series of telephone calls. For a time, ECI's egg prices were a major factor in the formulation of widely used egg-price quotations. However, since the volume of eggs traded through ECI represented only about half of 1 percent of all eggs sold in the United States, the market suffered from a lack of credibility. ECI still trades eggs, but it is no longer used for price setting.

CAMP Increased Produce Trading

Three of the total 14 systems (Florida, New Jersey, and Virginia) were developed specifically for fruit and vegetable markets. The most successful of these systems was taken over by a private company and operates under the name of Computer Aided Marketing Programs, Inc. (CAMP).

Using CAMP, produce buyers and sellers can match each other's offers and needs faster. CAMP can also be used to search for a particular produce item or produce trader, and it offers marketing management and auxiliary information services. CAMP's primary

benefit is increasing the number of produce traders and the amount of produce being traded.

Most face-to-face agricultural markets perform well, but technology could help some markets function more efficiently. Inefficient markets are characterized by obsolete technology; high handling, transporting, and procuring costs; and erratic pricing. Electronic markets can decrease costs and improve prices.

For example, the electronic system for marketing slaughter lambs, run by the National Electronic Marketing Association (NEMA), reduced marketing costs and improved competition. Buyers and sellers of lambs are geographically dispersed, with some buyers located as far away as Canada. The electronic arena not only lowers costs, but also increases the number of buyers and sellers in the markets.

USDA has developed certain guidelines for establishing electronic markets. While by no means the only assured method of setting up an electronic market, these guidelines have proven to be fairly consistent for establishing successful systems. The guidelines are as follows:

- When an agricultural market is identified as inefficient and less competitive than it could be, participants should be surveyed for their attitudes about the existing market and the desirability of an electronic market. Agricultural products that are already traded using descriptive grades are easier to computerize.
- The computerized market should be modeled as closely as possible after the existing market, and the computer programs should be user-friendly. This helps keep overhead low and more easily incorporates existing participants in the development phase.
- To improve the acceptability of the new system, participants should be involved in a training or test phase.
- An organization should be established to manage the electronic market and guarantee performance and financial credibility. The organization should troubleshoot for users, working out programming difficulties and other problems.

Electronic Marketing Systems Supported by USDA

System	Commodity	Description of project	Results & status
HAMS	Hogs	Experimental demonstration of sales using a computer network	Developed system for hogs, showed need for larger volume to be successful.
CATS	Wholesale meat products	Electronic marketing system for trading using computers	Showed system could trade wholesale meat products; showed need for larger volume to be successful.
CATTLEX	Feeder cattle	Electronic marketing system for trading using computers	Developed system for feeder cattle; showed need for larger volume to be successful.
NEMA	Slaughter lambs, feeder cattle	Electronic marketing system for trading using computers	System working & expanded to several regions.
ECI	Eggs	Convert manual trading to computerized system	Converted from a manual system to an electronic system, but no increase in volume traded.
MULTI-COMMODITY	Corn, soybeans, peanuts, hogs, pecans, cattle	Feasibility study for computerized trading system	Examined attitudes toward electronic marketing and developed cost analysis.
TENNESSEE	Hogs	Incorporate computers for trading	Traders chose to use direct sales rather than electronic marketing.
OKLAHOMA	Grains	Feasibility study for computerized trading system	Oklahoma State University & Virginia Tech are working on the development & structure of a grain electronic market.
VIRGINIA	Grains and fruit/vegetables	Feasibility study for grain computerized trading system; a computerized market information system for fruit & vegetables	Developed software to help cooperatives better market fruit & vegetables.
FLORIDA (CAMP)	Fruit & vegetables	Feasibility study for computerized trading system	Evaluated the impact of the produce marketing system (CAMP) on efficiency of marketing & determined level of user satisfaction; then assessed the impact of CAMP on operation and pricing efficiency. Currently operating as CAMP.
ILLINOIS	Wholesale meat	Assessment study of computer-assisted trading system	Evaluated system and compared it with other existing systems. Assessment limited to wholesale level.
NEW JERSEY	Peaches	Computer pricing program	Developed pricing system through university & is currently operating.
TEXAS	Agricultural products & livestock	Electronic trading system using video	Developed video cassettes through university to help promote exports.
INDIANA	Agricultural products	Computer system to benefit direct markets of agricultural products	Farm stand operations & other direct marketers were able to exchange information and supplement supplies.

Table updated and modified from U.S. General Accounting Office Report, March 1984.

SOURCE: Economic Research Service, USDA.

ELF Promotes Foreign Sales Of U.S. Breeding Livestock

Electronic trading is expanding into new areas. For example, USDA gave a grant to Oklahoma State University in 1986 to develop an Electronic Livestock Foreign (ELF) Marketing System for U.S. purebred livestock and related genetic material. This project promotes the export of U.S. breeding livestock.

The value of the electronic systems is evident in many nonagricultural arena, such as financial and home-buying markets. With all markets becoming more competitive, mergers between agricultural and nonagricultural trading systems are feasible, since diversification has proven to reduce risks. Already diversification within the agricultural industry is taking place. The cotton electronic trading system, TELCOT, is currently negotiating to incorporate a new electronic market for grain called the Grain Electronic Marketing (GEM) System.

With the current financial pressures facing agriculture, both domestically and internationally, electronic marketing systems can offer lower trading or marketing costs, higher market prices, and larger market access. [Shannon Hamm (202) 786-1767]

Upcoming Economic Reports

Summary Released	Title
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May

6	Livestock & Poultry
7	Western Europe
11	World Ag. Supply & Demand
12	USSR
18	Wheat
19	Agricultural Outlook
20	Exports
28	Eastern Europe

June

4	Southeast Asia
9	World Ag. Supply & Demand
10	Western Hemisphere
11	Sugar & Sweetener Yearbook
16	Agricultural Resources
17	Agricultural Outlook
18	Tobacco
19	Foreign Ag. Trade of the U.S.
22	World Agriculture
25	China

Upcoming Releases from the Agricultural Statistics Board

The following list gives the release dates of the major Agricultural Statistics Board reports that will be issued by the time June *Agricultural Outlook* comes off press.

May

1	Poultry Slaughter
	Egg Products
5	Dairy Products
	Dairy Products Annual
6	Celery
8	Vegetables
11	Crop Production
12	Turkey Hatchery
	Milk-Prod., Disp., & Income
14	Milk Production
15	Cattle on Feed; Farm Labor; Potato Stocks
18	Sugar Market Statistics
19	Catfish
21	Eggs, Chickens, & Turkeys
22	Cold Storage
	Livestock Slaughter
28	Peanut Stocks & Processing
29	Agricultural Prices



Farm Finance

PRODUCTION COST OUTLOOK

Production costs per planted acre for the major crops are forecast to drop 1 to 3 percent in 1987. (Peanuts are an exception, with costs forecast to increase about 5 percent, mainly because of higher seed costs.) Total operating expenses—for both crops and livestock—are forecast down 3 to 6 percent, depending on the region.

Variable expenses are showing the largest declines. Reduced fertilizer and agricultural chemical prices are leading the way, in part because of lower 1986 energy costs. Overall, eight of the ten crop categories making up USDA's prices paid index are forecast down for 1987.

Total fixed expenses will likely fall as interest rates level off and older loans are repaid. Also, with variable expenses lower, new operating loans will be for smaller amounts than last year, generating lower interest costs. Property taxes, insurance, and general business expenses may be higher than in 1986, though.

With fertilizer and chemical costs decreasing, the greatest benefits will go to corn farmers, who are major fertilizer users, and farmers in the South,

ForeCast 1987 Production Costs by Crop*

	Corn	Grain sorghum	Barley	Oats	All wheat	Rice	Soybeans	Peanuts	Cotton
	\$/planted acre								
Cash expenses									
Seed	17	4	6	8	6	25	8	81	8
Fertilizer	45	17	14	9	14	33	6	17	21
Lime & gypsum	1	1	--	1	--	0	1	12	1
Chemicals	17	8	5	1	3	26	17	77	44
Custom operations	7	3	3	4	6	33	4	7	16
Fuel, lube, & elect.	11	11	7	6	7	34	6	20	22
Repairs	11	10	9	7	7	22	6	19	19
Hired labor	2	2	1	1	1	14	2	8	12
Purchased irr. water	--	--	2	0	--	8	0	0	6
Drying	4	--	0	0	0	34	0	32	0
Ginning	0	0	0	0	0	0	0	0	54
Miscellaneous	--	--	1	1	--	0	--	--	1
Technical services	1	--	--	--	--	2	--	1	2
Total variable expenses	117	58	48	38	46	230	50	274	206
(% change from 1986)	(-2.1)	(-2.2)	(-1.5)	(-1.6)	(-1.1)	(-.5)	(-2.1)	(+7.8)	(-.5)
General farm overhead	16	8	10	5	9	26	11	30	25
Taxes & insurance	19	10	10	16	9	13	14	12	11
Cash interest	38	16	20	12	20	47	28	61	44
Total fixed expenses	73	35	39	33	38	86	53	103	81
(% change from 1986)	(-.9)	(-.3)	(-.7)	(+1.0)	(-.5)	(-1.1)	(-1.1)	(-1.5)	(-1.3)
Total cash expenses	190	92	87	72	84	316	104	377	286
(% change from 1986)	(-1.6)	(-1.5)	(-1.1)	(-.4)	(-.9)	(-.7)	(-1.6)	(+4.6)	(-.7)
Capital replacement	37	29	25	23	22	54	26	54	49

*Forecast costs are as of 03/01/87, rounded to the nearest dollar. Totals may not add because of rounding.
 -- = less than 50 cents.

where chemical use is high. An estimated 13 percent of total operating expense in the Corn Belt and the Delta is for fertilizers and chemicals.

These ERS price index and production cost forecasts are subject to revision. The estimates are based on national data; individual farmers' costs may be different. Also, costs per bushel, per cwt, or per pound depend on final yields. [Bob McElroy (202) 786-1801]

Prices Paid Index: Changes from Previous Year

	1986	1987F
	Percent	
Production items		
Seed	-3.3	-2.2
Fertilizer	-8.1	-2.0
Ag. chemicals	-.9	-2.7
Fuels & energy	-19.5	-.9
Farm & motor supplies	-1.6	-1.6
Auto & trucks	2.4	1.8
Tractors & SP machinery	-2.2	-1.4
Other machinery	.6	-1.5
Building & fencing	-.3	.2
Farm services & rent	.5	-1.5
All production items	-3.3	-2.1
All items inc. wages & taxes	-3.8	-1.8

F = forecast.

RECENT PUBLICATIONS

The following reports are available **FOR SALE ONLY** from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Order by report title and number. Make checks payable to Superintendent of Documents. Prices subject to change. Bulk discounts available. For faster service or further information call GPO's order desk at (202) 783-3238 and charge your purchase to your VISA, MasterCard, Choice, or GPO Deposit Account.

Costs of Producing Milk, 1975-84
 AER-569. (Price \$2.00) Stock Number 001-019-00507-6.

Alternative Ways to Index Farm Real Estate Values. TB-1724. (Price \$1.00) Stock Number 001-019-00498-3.



World Agriculture and Trade

WORLD WHEAT CUSTOMERS: WHO WILL THEY BE?

Wheat and rice are the major food grains of the world and comprise about 10 percent of today's international agricultural trade. The percentage of world wheat production that is traded on the international market is much higher than that of rice. The U.S. share of global wheat exports in 1986 was approximately 30 percent.

People in virtually every country in the world consume substantial amounts of wheat, and a few developed countries also use wheat for animal feed. The recent development of high-yielding but lower protein wheat varieties, which are price-competitive with coarse grains, has increased use of wheat as feed in several countries in the last few years.

Total world wheat utilization, including food, feed, and industrial uses, has risen from 235 million metric tons in 1960 to an estimated 617 million this year. The average gain per year has been about 11 million metric tons. If that rate prevails until 2000, world wheat utilization will rise to about 660 million metric tons. Much of this increase is occurring in low-income countries where adequate diets have not yet been reached, and where grains, rather than meat, are the principal food.

Country Group Classification

Staple food	Adequate diet	Inadequate diet
Meat & meat products	Group 1	"
Wheat & rice	Group 2	Group 3
Other	Group 4	Group 5

*No country studied had both inadequate diets and meat as the staple food.

Average Per Capita Income, Wheat Consumption, and Wheat Production in Five Country Groups

Country group	GDP, 1979-81	Consumption, 1978-80	Production, 1982-84	Growth rates	
				Consumption, 1966-80	Production, 1961-82
	\$ 1/	Kilograms/year		Percent 2/	
Group 1	6,829	118.6	334.6	-0.1	2.7
Group 2	3,239	129.1	92.6	1.2	-0.9
Group 3	761	48.2	40.0	3.1	3.2
Group 4	2,459	54.0	56.0	0.6	4.3
Group 5	893	19.2	3.9	4.8	1.4

1/ Purchasing power parity standardizes measures of income for comparison across countries. 2/ Annual compound rates.

Wheat is primarily used as a food grain. World wheat food consumption represents about 70 percent of total utilization, down from over three-fourths in the early 1960's. Prospects for growth in world wheat food consumption, especially in less developed countries, may hold the key to future U.S. wheat exports. Wheat food consumption rose to 326 million tons in 1982, the latest year for which data are available. The average increase in food use since 1961 has been about 7 million metric tons per year.

In discussing future world wheat food consumption, it is useful to distinguish among five groups of countries (see accompanying map). The groups are based upon average calorie intake and whether the major food consumed is meat, wheat/rice, or other food commodities such as coarse grains, roots, tubers, and plantains.

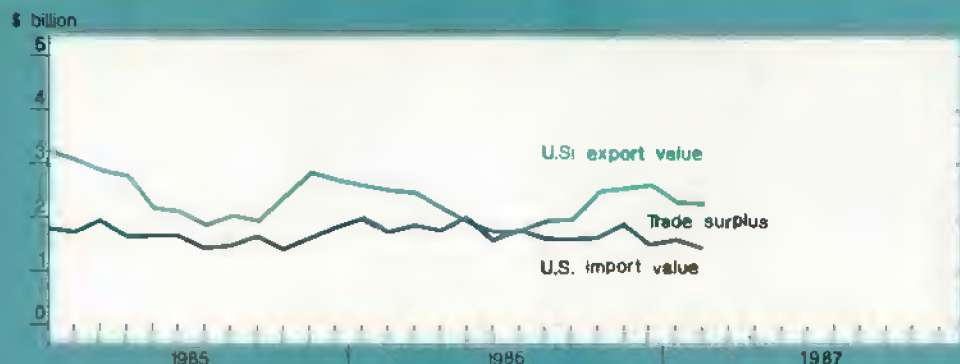
Wheat Consumption Declining in Group 1 Countries

Countries with meat and meat products as their staple food and adequate calorie intake are basically the industrialized countries of North America, Northern Europe, and Oceania, plus Argentina. These Group 1 countries consumed an average of 119 kilograms of wheat per capita annually during 1978-1980.

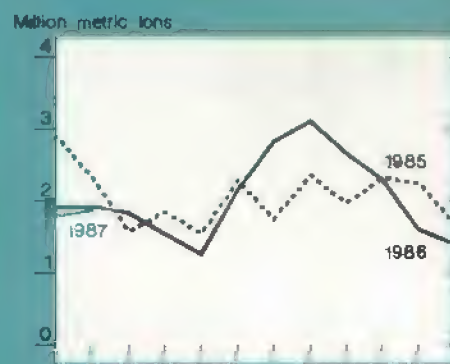
However, per capita wheat consumption within Group 1 declined by 0.1 percent annually from 1966 to 1980, while consumption of meat rose. Eight countries (Argentina, Belgium-Luxembourg, Denmark, Finland, Ireland, the Netherlands, New Zealand, and Switzerland) decreased their per capita wheat consumption annually from 1966 to 1980. Only two countries (Australia and New Zealand) decreased their annual meat consumption over the period.

U.S. Agricultural Trade Indicators

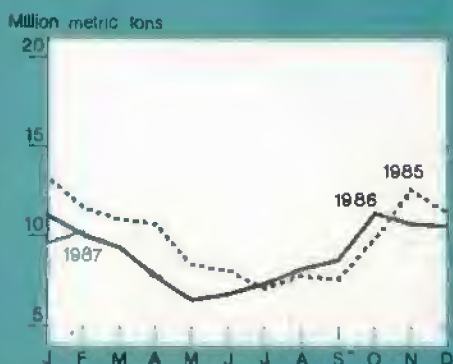
U.S. agricultural trade balance



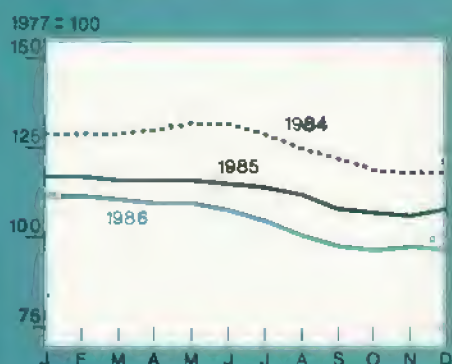
U.S. wheat exports



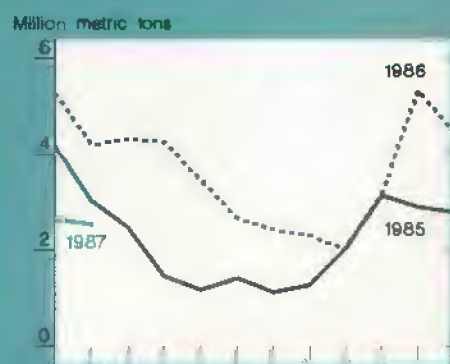
Export volume



Index of export prices



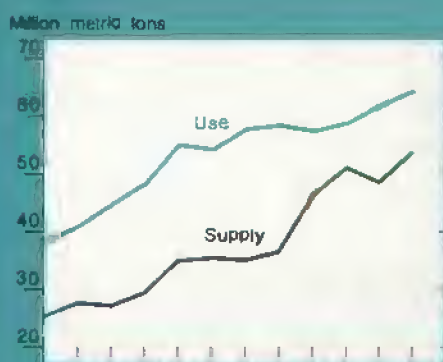
U.S. corn exports



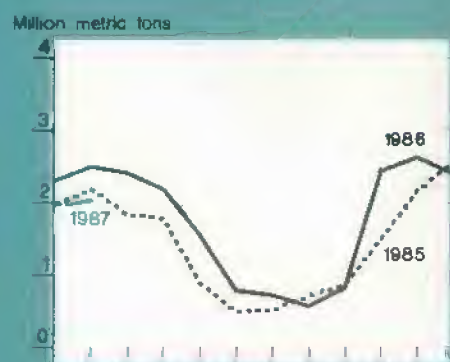
Foreign supply & use of coarse grains



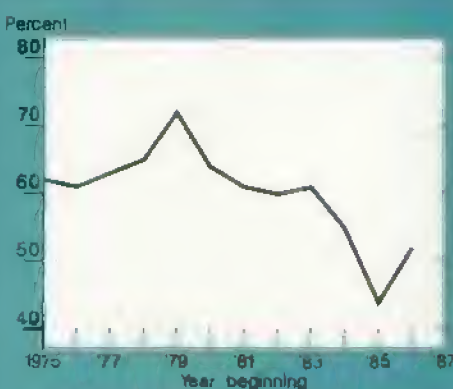
Foreign supply & use of soybeans



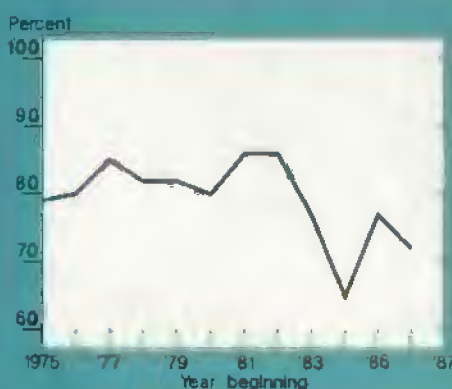
U.S. soybean exports



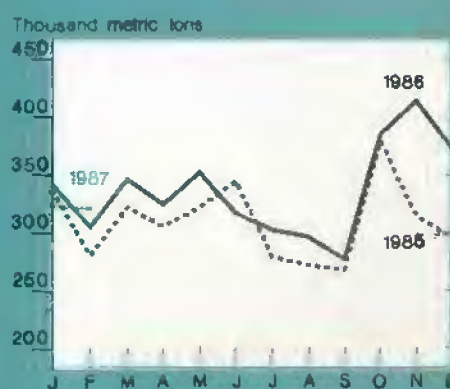
U.S. share of world coarse grains exports^{1/2}



U.S. share of world soybean exports



U.S. fruit & vegetable exports³

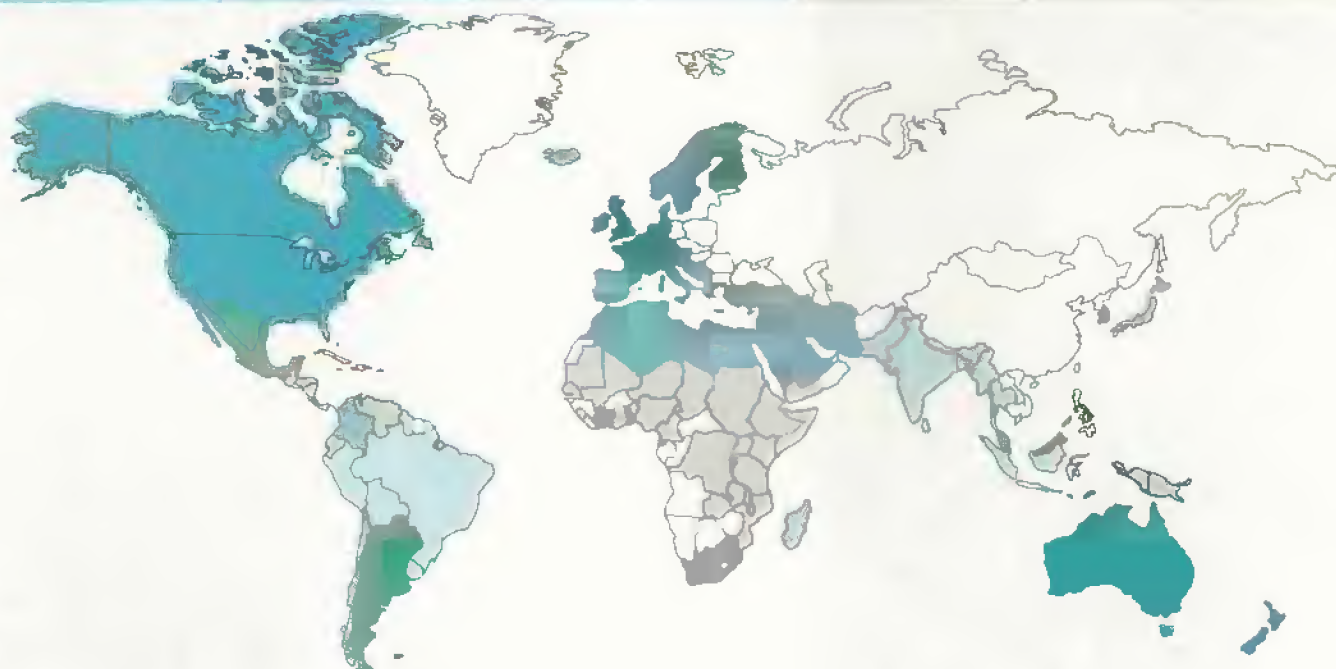


^{1/} Excluding intra-EC trade. ^{2/} October-September years. ^{3/} Includes fruit juices.

Note: Wheat, corn, soybean, and cotton exchange rates and export unit values are now included in the U.S. Agricultural Trade tables at the back of this issue.

Country Groups According to Caloric Intake Per Capito and Staple Food

I		II		III		IV	V	
Argentina		Algeria	Korea, Rep.	Bangladesh	Madagascar	Costa Rica	Benin	Mauritania
Australia		Chile	Libya	Bolivia	Nepal	Mexico	Brunei	Mozambique
Austria		Colombia	Malaysia	Brazil	Pakistan	Paraguay	Burundi	Nicaragua
Belgium-Luxembourg		Egypt	Mauritius	Burma	Panama	South Africa	Cameroon	Niger
Canada		Greece	Morocco	Dominican Rep	Peru		Chad	Nigeria
Denmark		Hong Kong	Norway	Gambia	Philippines		Ecuador	Papua New Guinea
Finland		Iceland	Portugal	Guyana	Sierra Leone		El Salvador	Rwanda
France		Iran	Saudi Arabia	India	Sri Lanka		Ethiopia	Senegal
Germany, Fed. Rep.		Iraq	Singapore	Indonesia	Thailand		Ghana	Somalia
Ireland		Israel	Spain	Liberia	Uruguay		Guatemala	Sudan
Netherlands		Italy	Syria				Guinea	Tanzania
New Zealand		Ivory Coast	Trinidad				Haiti	Togo
Sweden		Jamaica	Tunisia				Honduras	Uganda
Switzerland		Japan	Turkey				Kenya	Venezuela
U.K.		Jordan	Yugoslavia				Malawi	Yemen Arab Rep.
U.S.							Mali	Zaire
								Zambia



No data available on unshaded countries.

In contrast to their declining wheat consumption, these countries raised per capita wheat production 2.7 percent annually from 1961 to 1982. Wheat production grew faster (or declined less rapidly) than wheat consumption in every country within the group. Production of meat and meat products also climbed faster than consumption—1.8 percent versus 1.3 percent annually.

Consumption Gaining in Group 2 Countries

Group 2 countries are those with adequate calorie intake and wheat or rice as the staple food. These nations consumed only slightly more wheat than Group 1—129 kilograms per capita per year from 1978 to 1980—but per

capita consumption from 1966 to 1980 grew at a rate of 1.2 percent annually for wheat and 3.3 percent for meat. Both these average values are considerably larger than for Group 1.

Despite increasing consumption, per capita wheat production for Group 2 countries declined by 0.9 percent annually from 1961 to 1982. Indeed, on a per capita basis, wheat consumption increased faster (or declined less) than production in all but six of these countries—Yugoslavia, Turkey, Spain, Saudi Arabia, Norway, and Greece.

Group 2 can be subdivided into three strata by rate of growth in per capita wheat consumption: greater than 1 percent, 0 to 1 percent, and negative.

The Group 2 countries with wheat consumption growth rates greater than 1 had the lowest average gross domestic product per capita from 1979 to 1981 and the lowest per capita meat consumption of the three subgroups.

In the subgroup of countries with wheat consumption growth rates between 0 and 1, GDP and meat consumption growth rates were also intermediate between the other two subgroups. Finally, the subgroup with decreasing wheat consumption had the

¹ Algeria, Egypt, Iran, Iraq, Ivory Coast, Libya, Malaysia, Mauritius, Morocco, Portugal, Saudi Arabia, South Korea, Tunisia.

highest average GDP, and consumed the most meat and the least wheat per capita.

These results illustrate that there is a shift from wheat to meat and meat products as incomes rise. Thus, within Group 2, the wheat market appears to have potential for expansion mainly in the lowest income subgroup.¹ The market is approaching stability in the intermediate income subgroup and declining in the highest income subgroup. The per capita production of wheat is declining in each subgroup.

Low-Income Group 3 Countries Represent Wheat Growth Market

Group 3 countries include many third world countries with inadequate diets and wheat or rice as a staple food. The average per capita GDP of Group 3 countries was about one-fourth that of Group 2 countries in 1979-1981. Meanwhile, the average per capita wheat consumption level was slightly more than one-third that in Group 2, at 48 kilograms per capita annually.

However, the average growth rate for wheat consumption in Group 3 countries was 3.1 percent annually, compared with -0.1 for Group 1 and 1.2 for Group 2.

Per capita wheat production for those Group 3 countries that produce wheat grew at 3.2 percent annually from 1961 to 1982. Within these countries, approximately half had higher per capita consumption growth than production growth. Thus, Group 3 countries hold considerable potential for increased market demand for wheat and rice. Both the physiological caloric demand and the increase allowed by economic development are not yet fulfilled.

The extent to which wheat may substitute for rice in these countries is unclear, since rice is itself a preferred food grain. For this reason, wheat consumption in rice-eating countries is unlikely to reach the levels noted in the wheat-eating Group 2 countries. However, urban populations seem to prefer wheat (in the form of bread) over rice, and since urbanization is proceeding very rapidly in most developing countries, wheat consumption is likely to continue gaining.

Where Corn Is Staple, Wheat Consumption Is Low

On average, people in Mexico, Costa Rica, Paraguay, and South Africa have adequate diets and eat corn as their staple food, constituting Group 4. Average wheat consumption per capita during 1978-80 was 54 kilograms per year in these corn-eating countries. Growth in per capita wheat consumption has been only 0.6 percent per year, and it will likely continue sluggish.

Although theoretically there is potential for a considerable increase in per capita wheat consumption in Group 4, this would require a shift from corn to wheat. The data do not indicate that this shift is occurring rapidly.

Group 5 Consumes Least Wheat Per Capita

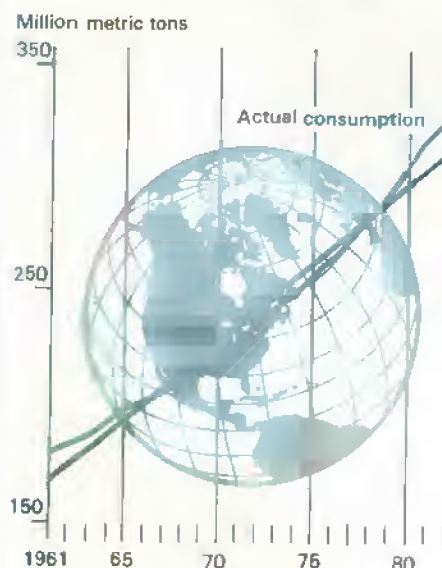
Countries in Group 5 have inadequate diets and use roots, tubers, coarse grains, or plantains as their staple food. Of all groups, Group 5 countries consumed the least wheat per capita during 1978-80, although consumption in these countries grew 4.8 percent annually from 1966 to 1980, considerably faster than in any other group. Since wheat consumption averaged only 15.8 kilograms per person per year in 1978-80, high per capita growth can be sustained for many years before physiological needs and economic wants are met.

Moreover, in these countries, per capita wheat production increased only 1.4 percent annually, much slower than consumption. Only seven countries in this group increased per capita wheat production faster than consumption: Chad, Malawi, Sudan, Tanzania, Uganda, Zaire, and Zambia.

Food Aid May Boost Consumption

U.S. food aid under P.L. 480 boosts wheat consumption in recipient countries. Many P.L. 480 recipients fall within Groups 3 and 5, which had the highest growth in per capita wheat consumption from 1966 to 1980. Food aid received from all donors accounted for 2.6 percent of the total cereal-equivalent consumption of grains, roots, and tubers in 69 recipient countries studied. Since the United States contributes approximately half of the total assessed grain needs of these countries, P.L. 480 shipments supported 1.3 percent of the total cereal-equivalent consumption.

World Wheat Consumption for Food Exceeds Trend in Eighties



*Trend consumption = $163.26 + 6.72$
(1961 = 1); $R^2 = .97$.

Per capita food production, measured in calories, has been declining in 38 of the 69 food aid recipient countries. In those 38 countries, P.L. 480 is very likely responsible for the gains in per capita wheat consumption.

For those countries where both domestic per capita food production and wheat consumption have been increasing, the role of P.L. 480 is not as clear. Food aid shipments could be targeted to a specific group and never move through the marketplace. In this instance, the increase in consumption by the targeted group is probably entirely supported by food aid.

In countries where domestic food production and imports (both commercial and concessional) have been rising, it is again much less obvious whether P.L. 480 is directly responsible for observed increases in per capita wheat consumption.

Economic Growth Is Key to Export Growth

Per capita consumption of wheat from 1978 to 1980 was highest in Groups 1 and 2, but their consumption growth, in per capita percent increases compounded annually, is very slow. Therefore, opportunities for expansion of per capita wheat demand in the well-fed countries appears limited. Indeed, in Group 2 the evidence suggests

that per capita wheat consumption will decline as meat is substituted for wheat, as is already occurring in Group 1. Group 4, with four corn-eating countries, also does not seem to be expanding per capita wheat consumption substantially.

Groups 3 and 5, both with inadequate average diets, had high growth in per capita wheat consumption during 1966-1980 and high population growth rates (2.3 and 2.9 percent, respectively), suggesting potential for very rapid growth in wheat demand.

With a total population of 1.7 billion in Groups 3 and 5, per capita consumption and population growth together could boost wheat demand over 10 million tons annually. Further, growth in per capita wheat production in these countries lags behind the growth in population. Production gains are less than consumption growth in Group 5 and approximately equal to consumption growth in Group 3.

Without doubt, there exists a huge potential market in Groups 3 and 5. But that potential cannot be translated into commercial demand for wheat unless these countries' economies grow. For those Group 3 and 5 countries generating additional income, a very large share—approximately 80 percent—will be spent on food. The food grains, especially wheat, will capture the bulk of the increased food expenditures.

But not all countries in Groups 3 and 5 have experienced economic growth. In fact, several countries' economies have contracted since the oil crises of the 1970's. Also, these low- and no-growth countries typically have substantial international debt. The lack of economic growth and high debt means most of these countries must rely on concessional food aid to improve their per capita consumption. (Suzanne M. Marks and Mervin J. Yetley (202) 786-1705)



Food and Marketing

THE NEW CPI

The Consumer Price Index (CPI) has a new look for 1987. The change results from 5 years of research to update the fixed market basket of goods and services on which the CPI is based. In addition, the Bureau of Labor Statistics (BLS) has improved procedures for gathering and processing monthly price data. BLS updates and revises the CPI periodically so that it represents as accurately as possible the changes in types of goods and services that consumers purchase.

The most significant change in the new CPI is that food has fallen from constituting 19 percent of total consumer expenditures to making up only 16 percent. Within the CPI for food only, food-away-from home is now given more weight—going from 33.3 percent of the total to 38.6. Accordingly, food at home has decreased to 61.4 percent, from 66.7.

These shifts—in both the full CPI and the food CPI—come from real growth in disposable personal income since the last CPI revision. With increased income, consumers' budget constraints are eased, allowing expenditures for a wider range of goods and services. Food expenditures increase as incomes rise, but gains are strongest for foods offering more convenience and service—prepared foods and food away from home.

Other changes in the food components of the CPI have been minimal. The major food categories have not changed. However, 33 of the 74 sub-categories have been collapsed into 15 slightly broader categories. For example, under the pork component, canned and noncanned ham have been combined into one category. Some of the more detailed indexes may still be available, but they are statistically less reliable. The BLS average price program will still be published, in some cases in less detail.

Shifts in population can influence the mix of goods and services consumers purchase. To capture population

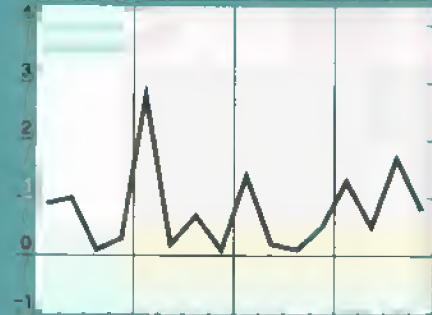
Relative Importance of Major CPI Food Categories

CPI categories	Revised weight	Old weight
	Percent	
Food away from home	38.6	33.2
Food at home	61.4	66.8
Cereal & bakery	13.6	13.6
Red meats	20.9	23.7
Beef & veal	10.2	12.2
Pork	6.6	7.5
Poultry	4.9	3.4
Eggs	1.9	1.5
Dairy	12.7	12.5
Fruit/vegetables	16.6	15.3
Fresh fruit	5.2	4.2
Fresh vegetables	5.0	4.3
Processed fruit/veg.	6.4	6.8
Sugar & sweets	3.6	3.8
Fats & oils	2.6	2.7
Nonalcoholic beverages	9.8	10.9
Other prepared foods	10.4	9.0
Frozen prepared foods	1.9	1.4
Food as percent of all items	16.246	19.008

Food and Marketing Indicators

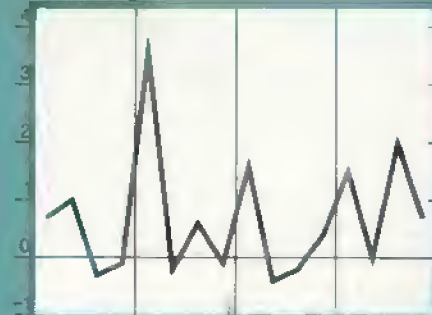
CPI: Total food^o

Percent change



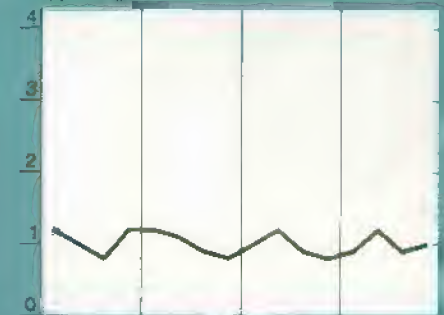
CPI: Food at home^o

Percent change



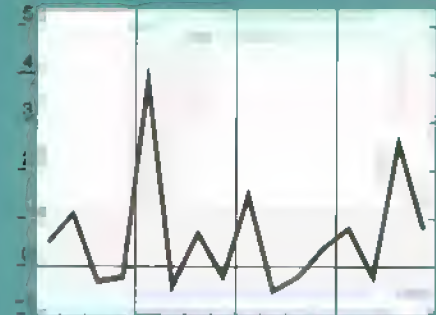
CPI: Food away from home^o

Percent change



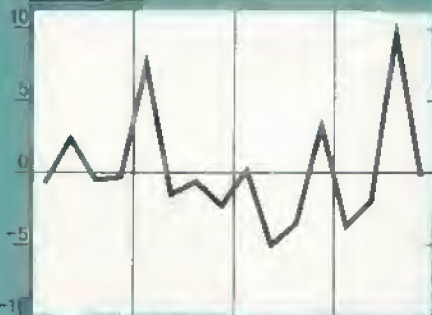
Retail cost of food¹

Percent change



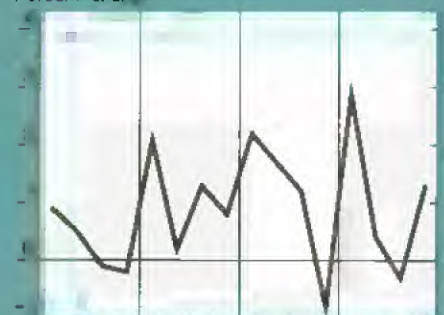
Farm value of food¹

Percent change



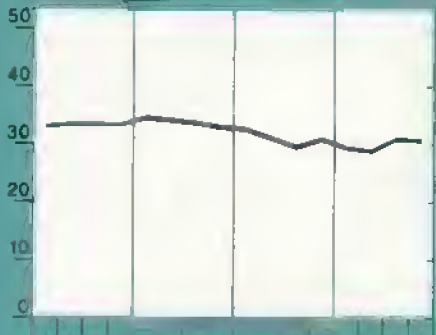
Farm-retail spread¹

Percent change



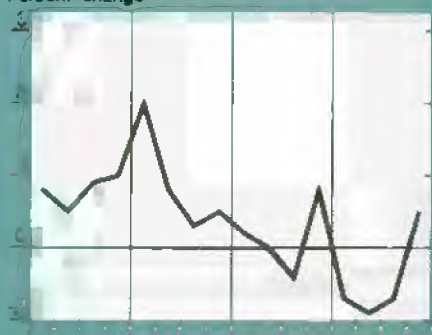
Farm value/retail cost¹

Percent change



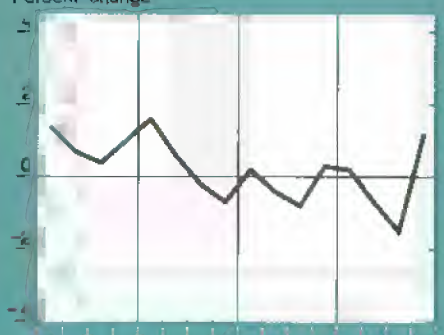
Food marketing cost index²

Percent change



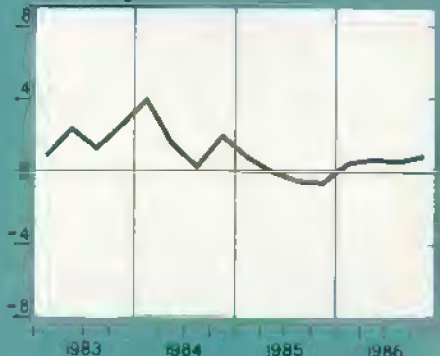
Index of hourly earnings^{3,4}

Percent change



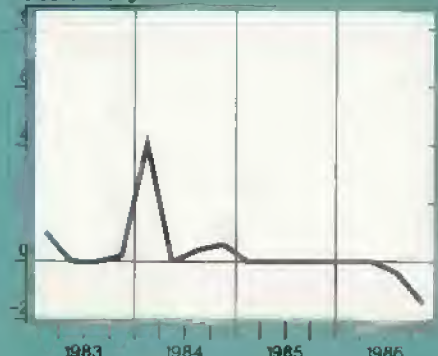
Index of packaging prices⁴

Percent change



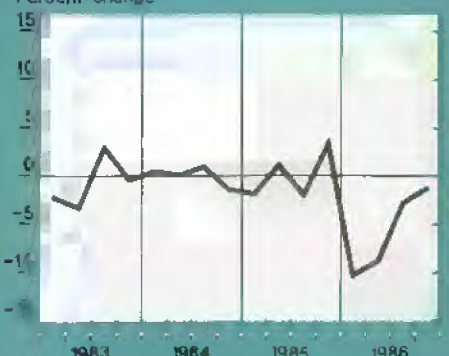
Index of rail freight rates⁴

Percent change



Index of energy rates⁴

Percent change



^oCPI unadjusted. Index based on market basket of farm foods. Index of changes in labor, packaging, transportation, energy, and other marketing costs in food retailing, wholesaling, and processing. ⁴Component of food marketing cost index.

All series expressed as percentage change from preceding quarter, except for 'Farm value/retail cost' chart.

May 1987

changes, BLS used the 1980 Census of Population to modify the geographic areas where price information is gathered. The South now has eight more price-information areas, and the North Central region one more. The Northeast declined by three, and the West is unchanged. [Ralph Parlett (202) 786-1870]

CONSUMER SPENDING; THE MARKETING BILL

Consumer spending for domestically produced farm foods is expected to gain nearly 4.5 percent in 1987, rising to about \$377 billion. The increase is nearly the same as the 4.6-percent average annual rise between 1982 and 1986.

Retail food prices are forecast to increase 2 to 3 percent, accounting for much of the rise in spending. The price of food away from home will go up slightly more—3 to 4 percent. Total spending will also climb because of a projected 1-percent expansion in the civilian population. Per capita consumption of food will increase little.

Farm Value To Gain Less Than 1 Percent

The farm value of 1987 food spending—that portion of food expenditures returned to the farmer—is expected to increase less than 1 percent, to about \$89.6 billion, mainly from higher cattle prices. Beef prices will be strengthened not only by a production cut, but also by the expected 2.7-percent increase in real per capita disposable income.

Little change is likely in the farm value of poultry and eggs, since a 6-percent hike in production will probably be offset by lower producer prices. Grain supplies will remain large, and production declines likely will not be sufficient to boost the farm value. The farm value of fruit and vegetables may rise, reflecting a fruit production gain which will more than offset any price drop. A small increase in the farm value of dairy products may occur because of a further gain in commercial milk use.

Marketing Bill To Maintain Upward Trend

The marketing bill—the cost of processing, handling, and distributing domestically produced food—will rise about 5.7 percent in 1987, to \$287.7 billion. The bill will take about 76

Components of Consumer Food Spending

	1976	1984	1985	1986
\$ billion				
Consumer expenditures	183.3	332.0	345.4	361.1
Farm value	58.3	91.4	88.3	89.0
Total marketing bill	125.0	240.6	257.1	272.1
Labor 1/	53.8	109.3	116.5	123.7
Packaging materials	14.9	26.3	27.6	28.8
Transportation				
(rail, truck) 2/	9.1	15.9	16.5	16.8
Energy	5.0	12.7	13.1	13.6
Corporate profits				
before taxes	7.6	15.9	17.0	17.8
Other 3/	35.0	60.5	66.4	71.4

1/ Includes pensions and health insurance premiums. Also includes imputed earnings of proprietors, partners, and family workers not receiving stated remuneration. 2/ Excludes local hauling charges. 3/ Business taxes, depreciation, rent, advertising, interest, and other costs.

percent of consumer expenditures, an increase of 1 percent over 1986. This gain maintains the trend of the last decade and reflects the large cumulative rise in marketing costs relative to farm value.

The marketing bill's rise is in line with the 5.9-percent average annual increase of the last 5 years. Trends in the cost of labor, packaging, transportation, and other marketing inputs are continuing.

In 1986 the marketing bill grew 5.8 percent to \$272.1 billion, a smaller increase than 1985's 6.9 percent. The 1986 gain resulted from the following developments in the marketing bill cost components:

Labor Costs Grew By 6 Percent Last Year

Labor costs are 45 percent of the marketing bill. They increased 6.2 percent in 1986, slightly more than the marketing bill's climb and about the same gain as the 1981-85 average. Following is a rundown of major labor cost developments in each of the four food industry sectors:

Food manufacturing.—Manufacturing posted a 2-percent increase last year in the number of workers. This represented the first rise since 1979, and the largest increase of the last 10 years. Poultry dressing plants were the primary source of the gain, as demand for processed poultry products (such as deboned chicken) soared, particularly in the away-from-home market.

Food wholesaling.—Employment in wholesaling establishments rose 4 percent, reflecting stronger demand for wholesaling services. Wholesale sales grew 7.5 percent from 1985 to 1986, as contrasted with a 3.9-percent gain from 1984 to 1985.

Food retailers.—Retailers experienced the largest employment increase of the four sectors, a 6-percent jump over 1985. Rising employment resulted from the growth of specialty departments (such as in-store bakeries, salad bars, and delicatessens) and expanded hours. Moreover, moderate economic growth spurred consumer demand for retail marketing services. Employment in this sector has trended up in the last few years. Hiring of part-time employees has also increased.

Store closings and multitiered wage contracts have continued to exert downward pressure on retailers' labor costs, especially salaries and benefits for new and part-time employees. In particular, chain stores which closed have reopened under different ownership with lower paid nonunion employees. However, store closings and demands for wage concessions diminished during 1986.

Some recent contracts call for wage freezes and lump-sum bonuses to food retailing workers, instead of increases in hourly wages. In some cases, bonuses are based on projected profits.

Also, workers' cost-of-living adjustments have been lowered, both by agreement and because of lower inflation.

Eating and drinking

places.— Employment in eating and drinking places grew 4 percent last year. This increase resulted from strong consumer demand augmented by rising personal incomes and two-income family lifestyles, which have reduced the amount of time available to prepare food at home.

Cost of Packaging Materials Climbed Less Than Usual

The cost of packaging materials rose 4.3 percent last year and comprised 8 percent of the marketing bill. The increase is attributable both to the larger volume of food marketed and to higher prices for some packaging materials.

However, the cost increase was slightly less than the 4.9-percent average of the last 5 years because of the drastic drop in energy costs. Prices for petroleum, a major input for several materials including plastic resins, decreased 40 percent in 1986.

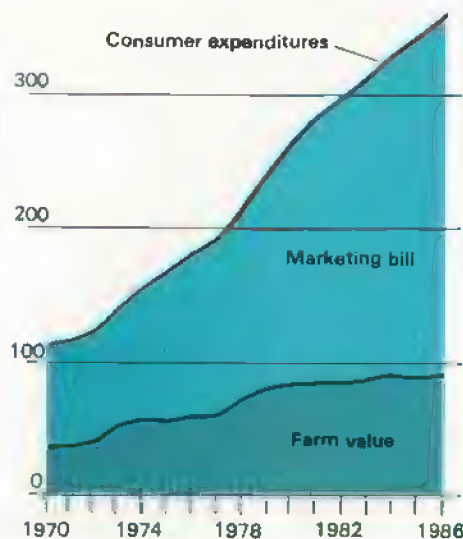
A number of developments are affecting the composition of food packaging materials. Glass containers are facing a strong challenge from aluminum cans, and large glass containers have been almost totally replaced by the 2-liter plastic bottle. In addition, a number of food items such as ketchup are now being shipped in plastic bottles instead of glass. Unit shipments of plastic bottles increased 8.3 percent in 1986.

Food can shipments last year dropped 1.1 percent from 1985. This decrease maintained a 10-year trend; unit shipments of cans have fallen 8 percent in a decade.

Grocery bags are still primarily paper, but plastics now account for about 25 percent of the market, and they are expected to increase steadily over the next few years.

Cost of Marketing Food Is Growing, But Farm Value Is Flat

\$ billion
400



Electric Rates Cause Energy Cost Hike

Energy costs posted a modest 3.8-percent increase in 1986, well below the 6.2-percent annual average gain from 1981 to 1985. Most of last year's increase was from a 1-percent rise in electric rates. Greater retail and food service sales, up 3.2 and 7.0 percent, respectively, translated into higher energy costs for these types of establishments, which make extensive use of electricity for lighting, heating, and refrigeration.

The oil price drop was primarily responsible for holding down the rise in energy costs, which continue to occupy 5 percent of the marketing bill.

Transportation Costs Rose Little

Transportation costs rose only 1.8 percent in 1986, to \$16.8 billion. This gain is considerably less than the annual average increase of 3.7 percent in the last half-decade. Transportation continues to take up 6 percent of the marketing bill. Like energy and packaging, transportation saw only a small increase because of the drop in fuel prices, which offset bigger labor and equipment costs.

Higher transportation costs were primarily caused by the greater demand for marketing services. For example, although the cost of operating produce trucks decreased about 3 percent, produce shipments increased 2.2 percent. Additionally, the rail freight index increased about 1 percent.

Profits Climbed Almost 5 Percent

Pretax profits rose 4.7 percent, to \$17.8 billion, but declined slightly as a share of the marketing bill to 6.5 percent. The increase was much lower than the 9.1-percent average annual gain of the previous 5-year period. Increased profits are primarily attributable to bigger sales volume, particularly in the away-from-home market. Consumers continue to respond to the stable economy by purchasing more processed food and eating out more frequently.

Generally, changes in farm prices are not immediately reflected in prices at other marketing levels. Profits as a percent of the total food bill declined slightly from 1985.

Miscellaneous Costs Up 7 Percent

A variety of miscellaneous costs, including advertising, rent, depreciation, and bad debts, accounted for the remainder of the marketing bill. These costs increased faster than the average annual increase of 5.6 percent from 1981 to 1985. Last year, they rose 7.4 percent to \$71.4 billion. Miscellaneous costs made up 26 percent of the marketing bill, about the same as in 1985.

A number of miscellaneous costs have strengthened the impact of this component on the marketing bill in recent years. For example, rent increases have boosted restaurant operating costs as land values have soared. Similarly, property taxes and insurance have gained because of increased real estate values. Finally, advertising and promotion costs have gone up, as retailers and food manufacturers have sought to attract business through promotional programs.

[Howard Elitzak (202) 786-1870]



Immigration Reform and U.S. Farm Labor

The Immigration Reform and Control Act of 1986 (IRCA), passed last November, seeks to prevent illegal aliens from working on U.S. farms. However, the law will grant legal status to many aliens and also help farmers hire foreign seasonal workers legally.

The statutory language of IRCA establishes the framework for new programs, but regulations issued by the Departments of Agriculture, Labor, and Justice will determine specific details. The new regulations will be issued by June 1, 1987.

IRCA seeks to control illegal immigration to the United States, mainly by penalizing employers who hire illegals. Under the law, persons who hire, recruit, or refer for a fee an alien not authorized to work in the United States are subject to fines from \$250 to \$10,000 for each unauthorized alien. Employers who persistently hire undocumented workers face jail terms of up to 6 months.

All persons applying for employment after November 6, 1986—U.S. citizens and noncitizens alike—are required to verify that they are eligible to work in the United States by showing an approved form of identification to the employer (U.S. passport, U.S. naturalization certificate, Social Security card, U.S. birth certificate, or other authorized form). An employer must then complete a form provided by the Justice Department indicating that the worker's identification was inspected.

Many Aliens To Gain Legal Status

Counting illegal aliens in the United States is difficult. Estimates have varied from 2 to 6 million. Whatever the

number, a massive enforcement effort would be required to locate and deport them all, which could cause serious economic and social disruptions. Instead, the new law provides for the legalization of illegal aliens who have lived continuously in the United States since January 1, 1982—the "amnesty" provision. Aliens may apply to the Immigration and Naturalization Service for legalization from May 5, 1987, to May 4, 1988.

The intent of legalization is to give illegal aliens who have established a life for themselves in the United States the chance to become legal residents with the right to seek employment.

Some illegal alien farmworkers will qualify for legal resident status, but the seasonal nature of much farm employment means that many may not qualify because they are normally not in the United States year-round.

Many alien farmworkers work only for a few months in the United States, often for more than one employer. They return to their home country for the rest of the year. Thus, there is a question as to whether legalization alone will provide enough workers to replace the illegals traditionally employed in agriculture.

Temporary Worker Program Revised

U.S. workers are not attracted to many farm jobs because the jobs' seasonal nature makes employment and earnings unstable. In 1985, only four of 10 hired farm workers worked 75 days or more on farms. Congress, recognizing that agriculture's labor needs may not be met by the amnesty program or by the U.S. labor force, added the Temporary Agricultural Worker Program (H-2A) and the Special Agricultural Worker Program to the new immigration law.

The new H-2A program revises the old H-2 program. Under H-2A, U.S. agricultural employers may hire alien workers temporarily when qualified U.S. workers are not available at the time and place needed. Before an employer can recruit and hire a foreign worker, though, the Department of Labor must certify that such employment will not reduce wages and employment opportunities of U.S. workers similarly employed, and the employer must agree to hire qualified U.S. workers who apply for the jobs.

To prevent the employment of foreign workers from depressing wages of U.S. farm workers, employers of H-2A workers must pay them a predetermined minimum wage, known as the adverse effect wage rate. Employers must also maintain working conditions as required by the immigration law. The adverse effect wage rates and the details of how working conditions are to be assured will be governed by the Department of Labor.

Aliens employed under the H-2A program may work only in farm jobs certified by the Department of Labor. Normally, an H-2A worker will not be permitted to stay in the United States for more than 11 months each year.

Some H-2A revisions of the H-2 program were designed to make the new program more accessible to agricultural employers. For example, the deadline for filing applications for foreign workers was reduced from 80 to 60 days before the date the employer needs workers. The law also provides for a faster appeals process for employers whose original requests for workers were denied.

Under the old H-2 program, relatively few farm jobs were certified for foreign workers. For example, only 21,000 jobs were certified in 1985, for about 1,900 employers—less than 1 percent of all farm employers. About half of the jobs were for hand-harvesting sugar cane in Florida. Tobacco growers in Virginia, apple producers in several Northeastern States, and sheep ranchers in Western States also employed H-2 workers. More agricultural employers may now turn to the H-2A program because the U.S. labor force, IRCA's new Special Agricultural Worker Program, and the amnesty program may not provide enough workers to replace the illegal aliens previously employed.

Several provisions of the H-2A program may directly affect farm labor costs. The adverse effect wage rate will normally be higher than prevailing farm wage rates. For example, under the old H-2 program, the 1986 adverse effect wage rate for workers in Virginia was 17 percent higher than the prevailing wage. Employers of H-2A workers also must furnish their workers rent-free housing and pay for their round-trip transportation to the farm.

Special Agricultural Worker Program Aims at Perishables

The Special Agricultural Worker Program is designed to help certain employers who have traditionally relied on illegal aliens to adjust to a legal work force. It will supplement the supply of U.S. seasonal workers for producers of perishable agricultural commodities. The program is limited to workers performing "seasonal agricultural services," and it ends in fiscal 1993.

Seasonal agricultural services are defined as "field work related to the planting, cultural practices, cultivating, growing, and harvesting of fruits and vegetables of every kind and other perishable commodities....".

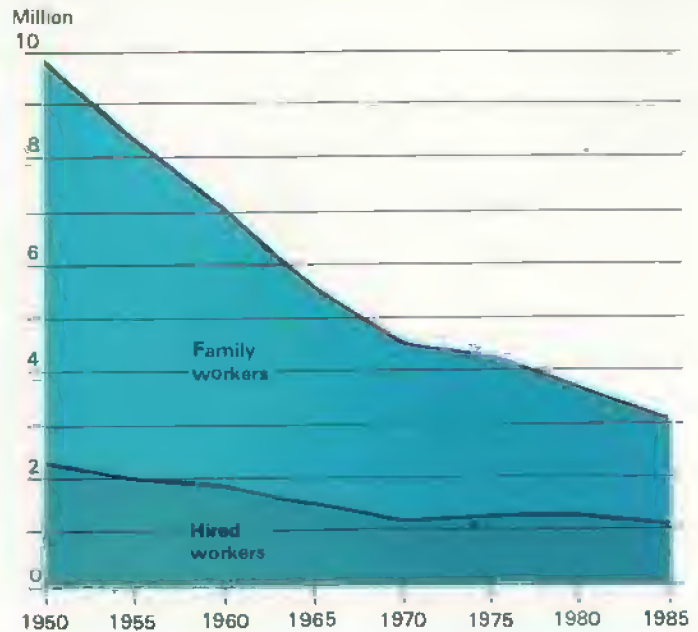
The Special Agricultural Worker Program will supplement the U.S. seasonal work force for perishable commodities in two ways. First, the program legalizes certain aliens who have worked in the United States performing seasonal agricultural services. Second, in case seasonal labor shortages persist, the program allows for "replenishment workers" to come into the United States.

The program recognizes two groups of workers who have done seasonal farm work in the United States. The first, which is capped at 350,000, includes persons who performed seasonal agricultural services for at least 90 man-days in each of 3 years ending May 1, 1984, 1985, and 1986. The second group includes all others who qualify for group one but exceed the 350,000 limit, and also persons who worked at least 90 man-days during the year ending May 1, 1986.

Eligible aliens who apply under this program are first made temporary residents, and subsequently permanent residents. Group one workers must wait a year for permanent resident status and group two workers 2 years. Aliens may apply for legalization under the Special Agricultural Worker Program from June 1, 1987, to November 30, 1988.

Although there is no requirement that these workers continue to work in agriculture after they become legal residents, it is assumed that many of them will do so. How-

Fewer Family Farmworkers Make Hired Workers More Important



ever, if there is a shortage of seasonal farm workers during fiscal 1989, the shortage will trigger a second phase of this program, providing for the admission of replenishment workers starting in fiscal 1990.

Replenishment workers will be required to work in seasonal agricultural services for at least 90 man-days per year in each of the first 3 years of residence in order to keep from being deported. If they do this, they will become permanent residents. However, they must work 90 man-days in seasonal agricultural services for 2 additional years to qualify for U.S. citizenship. All special agricultural workers are eligible to apply for employment in the nonfarm sector.

Farmers Concerned About Immigration Reforms

The majority of farmers in the United States are not directly concerned about hired farm labor. But, the more than 800,000 farmers who do employ workers have an interest in labor issues in general and in the new immigration law in particular.

Farm employers spent about \$11 billion for hired labor in 1985. Farms with hired workers accounted for 84 percent of total crop and livestock sales. For vegetable and melon farms, fruit and tree nut farms, and nurseries and greenhouses, operations with hired workers constituted 96 to 99 percent of total sales.

On average, about 1.1 million hired workers were employed on U.S. farms in 1985. The number of persons who did hired farm work—2.5 million—was greater than the average employment because of job turnover and the fact that different workers may be employed at different times in different production regions.

Less than 10 percent of the hired farmworkers in 1985 were migrants. Information is not available to estimate the number of illegal alien farmworkers, but given overall employment in agriculture, the number must comprise a relatively small portion of the illegal alien population in the United States.

Decline in Family Labor Has Made Hired Labor More Critical

During the last three to four decades, both family employment and hired employment on farms have declined. But, farm family employment has fallen faster, so the proportion of hired employment has increased from about 23 percent in 1950 to 35 percent in 1985. In the early 1970's, when farmers enjoyed favorable prices and incomes, hired employment increased slightly in total numbers, as well as in share.

Employment in agriculture has decreased over the long term because of productivity gains resulting from mechanization and other improvements in farm technology, and because of higher income from off-farm employment. Farms have become fewer and larger. The decline in farm numbers reduced the number of family workers, while farm enlargement increased the number of hired workers on these bigger farms.

The mechanization of many farm operations progressed rapidly in the 1950's and 1960's, causing large declines in farm employment. Since then, the advances have slowed considerably. The mechanization of fruit and vegetable

harvesting is far from completed, and large quantities of seasonal labor are still required in their production. Several commodities, including citrus, fresh-market apples, lettuce, broccoli, and cauliflower, are harvested mainly by hand.

Labor Expenses Vary Greatly By Type of Farm

Differences in labor requirements among commodities are suggested by expenditures for hired labor. In 1985, vegetable and melon farms, fruit and tree nut farms, and nurseries and greenhouses combined comprised only about 8 percent of farms with labor expenses. But, they accounted for 35 percent of all farm labor expenses. All additional crop farms—including cash grain, tobacco, and cotton—reported only 27 percent of labor expenses, and livestock farms accounted for only 38 percent.

Average spending for labor on farms with hired workers varied greatly by type of farm in 1985. The labor expenditures per vegetable and melon farm were \$54,629; per fruit and tree nut farm, \$41,360; and per nursery and greenhouse farm, \$72,154. In contrast, labor expenses per operation averaged \$8,900 on all additional crop farms and \$9,200 on livestock farms.

Besides affecting some types of farms more than others, the immigration reforms are also likely to affect agriculture in some States more than others. Farms in 10 States, led by California, Florida, and Texas, account for about 56 percent of total U.S. expenses for farm labor.

Impact Uncertain

The new law's impact on labor availability, labor costs, and farm production will ultimately depend on the decisions of farmworkers and farmers. Alien farmworkers who are eligible for legalization under the major amnesty program or the Special Agricultural Worker Program must decide whether to apply for legalization, and those who become legal residents must decide whether to seek farm or non-farm work.

In the event that too few newly legalized aliens decide to seek farm employment to meet labor needs, farm employers must decide whether to recruit additional U.S. workers, apply for workers under the H-2A program, attempt to mechanize, or reduce production of the more labor-intensive commodities. [Robert Coltrane (202) 786-1932]

Labor Expenses ^{1/2} By Type of Farm, 1985

Type of farm	Total farms	Distribution of labor expenses	Average labor expenses per farm 1/	Labor expenses as share of variable farm production expenses 2/	Share of total farm sales by farms with labor expenses 3/
	Number	Percent	\$		Percent
Cash grain	223,121	15.0	7,350	9.4	79.1
Tobacco & cotton	75,060	7.0	10,277	20.1	96.3
Vegetable & melon	19,019	9.5	54,629	32.2	98.4
Fruit & tree nut	35,184	13.3	41,360	48.2	96.4
Nursery & greenhouse	18,412	12.1	72,154	53.6	98.8
Other crop	41,058	5.4	14,492	19.8	90.7
Beef, hogs, & sheep	264,559	18.1	6,240	7.4	79.3
Dairy	124,979	16.8	14,488	14.1	86.8
Poultry	17,894	2.0	12,292	5.7	75.7
Other livestock	40,846	4.1	11,059	20.0	84.1
All farms	660,132	100.0	12,745	14.7	84.1

1/ Average of all farms reporting hired and/or contract labor expenses. 2/ Variable farm production expenses are operating expenses minus business, insurance, taxes, and real estate interest expenses. 3/ Total crop and livestock sales.

Source: Economic Research Service, 1985 Farm Costs and Return Survey.



Some International Experiences with Mandatory Supply Controls

The idea of mandatory supply controls—agricultural policies which administratively determine the amount farmers can produce and sell—is not new. The United States has used quota controls in the past for wheat, rice, sugar, cotton, tobacco, and peanuts. Marketing quotas and/or acreage allotment are currently in use for tobacco and edible peanuts. Other countries use controls too; examples include the dairy and poultry industries in Australia, Canada, and Israel, plus the EC dairy sector.

Congress is now debating a mandatory supply controls policy for major crops and dairy in the United States. Some of the long-term impacts of controls on issues such as farm income and food prices can be appraised by studying the experiences of other sectors and countries.

The first known attempt to regulate agricultural production by using quotas was in Virginia in 1621. Each grower was restricted to 1,000 tobacco plants of 9 leaves each. At that time, Virginia tobacco farmers were concerned about losing their share of the British tobacco market to "foreign" competition from the Caribbean Islands and Maryland, which refused to restrict production.

Mandatory controls on cotton and tobacco production were introduced in 1934. The 1938 Agricultural Adjustment Act expanded controls to other crops. The act required the Secretary of Agriculture to proclaim a marketing quota if anticipated supplies of a commodity exceeded a "normal" supply. Two-thirds of the voting growers had to approve the marketing quota in a special referendum. If the quota was approved, a grower could not sell more than a specified amount of the commodity or plant more than a specified acreage without incurring a high tax. If voters failed to

approve a marketing quota, price support loans on that commodity were not available for that marketing year. Or, if available, they were at a lower rate.

Marketing quotas for cotton were in effect from 1938 to 1943. Rice and tobacco quotas were proclaimed in 1939 and 1940, but were later rejected by producers. However, in subsequent years tobacco producers, confronted by record production and a collapse of prices, became staunch supporters of marketing quotas. Marketing quotas for wheat were approved by over 80 percent of voting growers in 1941 and 1942.

By 1941, marketing quotas were in effect for tobacco, sugar, upland cotton, wheat, and peanuts, but production restrictions were suspended during and immediately after World War II. Mandatory tobacco and edible peanut programs were reinstated after the war and have continued with modifications since then. In the 1950's, quotas were periodically in effect for wheat, cotton, and rice.

The Kennedy Administration proposed a broad system of mandatory controls in 1962, but only the wheat proposal became law. Even the wheat controls were shortlived—they were defeated in 1963. After that, programs favored voluntary rather than mandatory compliance.

Among foreign countries, well documented studies of mandatory controls exist for only a few cases, such as the egg and dairy industries in Australia, Canada, and Israel.

With the exception of tobacco in the United States and dairy in the European Community, controlled commodities are produced for the domestic market in each country and are not important export products. In addition, excepting U.S. tobacco, supply controls have been accompanied by strict import restrictions that have isolated the domestic market from foreign competition. Also, small reductions in the quantities produced have resulted in large increases in price. For example, in Australia and Canada, a 1-percent decline in the supplies of fluid milk and eggs can result in retail price increases of 5 to 10 percent.

Under Controls, Prices Are More Stable But Higher

Mandatory supply control policies have been justified for various reasons, including food security, price stability, increased farm income, health standards, rural development, and settlement of the land. In the long run, the policies tend to shift all or most of the cost of supporting farm income from the Government to consumers: consumers have more stable but higher prices under mandatory supply controls.

The controls' effects on prices can be illustrated by comparing U.S. egg and milk price trends with prices in countries that have mandatory supply control programs. Sufficient competition exists in the U.S. egg and dairy sectors (even with dairy price supports) that over time, real prices decline when supplies increase relative to demand. Since Canadian and Australian quotas were tightened or imposed in the middle 1970's, the gaps between U.S., Canadian, and Australian prices have clearly increased.

Features of Existing Mandatory Supply Control Programs

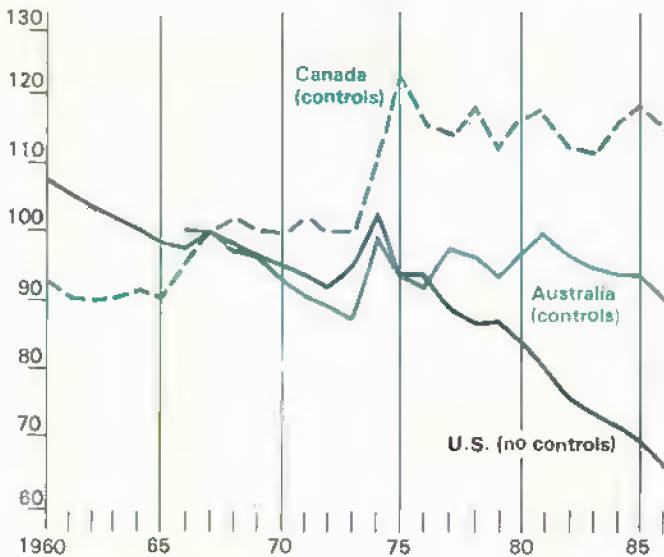
Country and Commodity	Period first implemented	Restricted item	Level of price setting	Level of enforcement	Are quotas marketable?	Enforcement by	Import limits	Exports
Australia								
Dairy	1960-1976	Fluid milk	All levels	State	No 1/	State boards	Restricted	Mainly surpluses
Eggs	1972-1975	Hens	All levels	State	Yes	State boards	Restricted	Surpluses only
Sugar	1915	Acres & weight	Refinery	State & federal	Yes	State boards	Prohibited	No re-strictions
Tobacco	1965	Weight	Farm level	Federal	Yes	Federal board	43% of total consumption	No re-strictions
Canada								
Dairy	1965-1975	All milk	All levels	Federal & provincial	Yes	Federal & provincial boards	Restricted	Surpluses only
Eggs	1973	Hens	Farm level	Federal & provincial	Yes 2/	Federal & provincial boards	Restricted	Surpluses only
Poultry meat	1974-1978	Live weight	Farm level	Federal & provincial	Yes	Federal & provincial boards	Restricted	Surpluses only
Tobacco	1957	Weight	Farm level	Provincial	Yes	Provincial board	Tariff only	No re-strictions
European Community								
Dairy	1984-1986	All milk	Farm level	Community & country	No	Country's dairy board	Restricted	Large & subsidized
Israel								
Dairy	1968	All milk	All levels	National	No	Dairy board	Restricted	Surpluses only
Eggs	1968	All eggs	All levels	National	No	Poultry board	Restricted	Surpluses only
Poultry meat	1970	Live weight	All levels	National	No	Poultry board	Restricted	Surpluses only
U.S.								
Peanuts	1934	Domestic edible weight	Farm level	Federal	Yes	ASCS	Restricted	No re-strictions
Tobacco	1938	Weight & acres	Farm level	Federal	Vary by type	ASCS	Open	No re-strictions

1/ Marketable in only one State. 2/ Marketable only with the whole farm.

Prices Higher in Countries With Mandatory Supply Controls

Milk Prices

1967 = 100



Indexes of real retail milk prices.

Over the last 20 years, U.S. real retail prices of eggs have declined by about 50 percent and milk prices by 30 percent. In contrast, real retail prices of eggs and milk in Australia and milk in Canada have remained almost constant or have declined only slightly. The Bureau of Agricultural Economics in Australia estimates that Australian consumers paid 40 percent more for eggs in 1983 than they would have without supply controls. Similarly, real retail milk prices in Canada are about 30 percent higher than those in the United States.

Mandatory supply controls stabilize prices because they reduce year-to-year variations in output. For example, real retail egg prices in Australia now vary only about two-thirds as much as before quotas were tightened. Egg production levels vary only about half as much as before the middle 1970's.

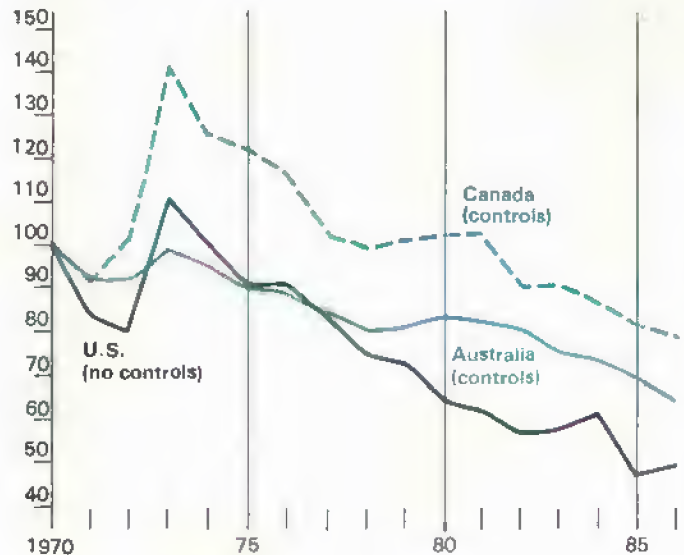
An individual producer's income under mandatory supply controls is affected by higher real farm prices, the level of production, the number of producers, and the quotas themselves, which become capital assets.

Just as with retail prices, real farm prices under controls have either increased or remained constant. Meanwhile, in the relatively competitive U.S. agricultural economy, real farm prices have generally declined.

To illustrate, after the tightening of mandatory supply controls in Ontario, real fluid milk prices there rose and then stabilized above levels of the 1960's. In contrast, U.S. real farm milk prices increased in the early 1970's, but then declined very significantly, especially after 1979. Thus, the real prices received by farmers for fluid milk under quotas in Ontario are much higher than those received by U.S. dairy farmers, even though U.S. prices are supported by Government purchases of dairy products.

Egg Prices

1970 = 100



Indexes of real retail egg prices.

Egg and dairy output in Australia and Canada have been only marginally affected by mandatory supply controls. Because of implementation problems, the EC's effort beginning in 1984 to cut dairy production has so far failed. Actual EC dairy production increased slightly in 1985 and 1986, despite the quotas put into effect in 1984.

Controls Have Not Stopped Decline in Farm Numbers

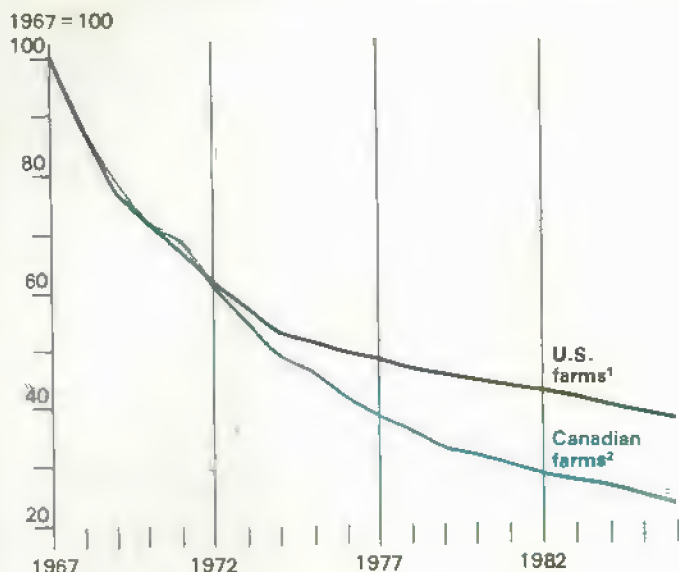
Mandatory supply control programs in Australia and Canada have not halted the decline in the number of farms. Since quota imposition in the mid-1970's, the number of Australian egg producers has dropped about 70 percent, from around 6,000 to less than 1,800 currently. Similarly, over the last 20 years the number of Canadian dairy farms has declined by about 80 percent, from around 175,000 in 1967 to 40,000 in 1986. By comparison, the number of U.S. dairy farms has declined about 60 percent.

One partial explanation is that in cases where production quotas can be bought and sold, as in Australia and Canada, quota holders may have a greater incentive to leave the industry because they can sell their quotas. At the same time, the cost of buying the quotas is likely to slow the entry of new farmers into the industry. For example, in Ontario, most of the dairy quota rights traded have been purchased by existing dairy operations rather than by new ones.

Once production controls are established, the quotas themselves become capital assets. For example, in 1986 the average price of Group I (fluid milk) quota in Ontario was Can\$131.00; this gives the buyer the right to sell 1 pound per day indefinitely or until the quota is sold. Adjusted for inflation, the value of the quota has increased fivefold since 1968. Elimination of quotas in the U.S. tobacco industry would cost owners an estimated \$400 million per year in lost quota rents.

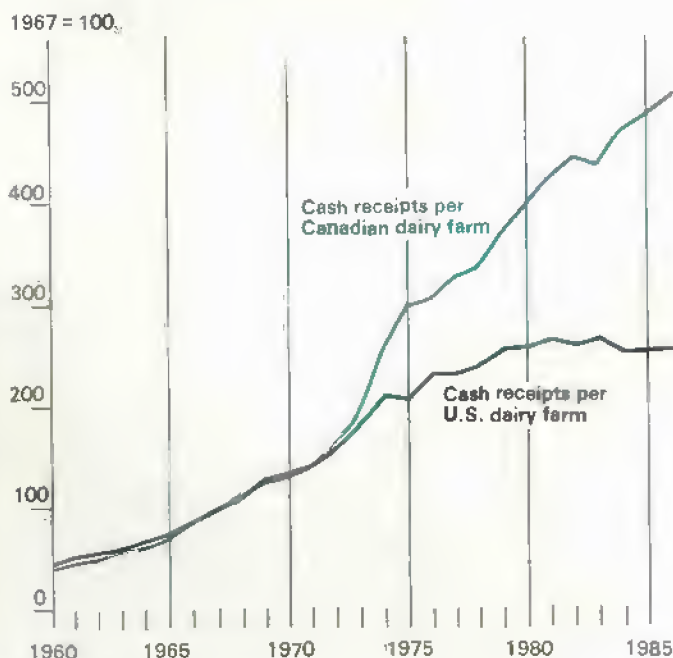
The value of the quotas means that the farmers who are producing when quotas go into effect gain wealth. But, new or expanding producers must pay the full cost of the quotas if they decide to move into or expand production. For example, the Ontario Milk Marketing Board has estimated that the cost of a milk quota for a 40-head dairy operation in Ontario is around Can\$180,000. For a new dairy operation, this represents about 30 percent of the total initial investment.

With Supply Controls, Canadian Dairy Farm Numbers Are Shrinking Faster Than U.S. . . .



¹Based on Census of Agriculture in 1964, '69, '72, '78, and '82.
²Registered dairy farms.

... But Cash Receipts Per Farm Are Better



Producers' Income Raised

Mandatory supply controls have substantially raised gross farm income for commodities that are not exported. For example, since 1960, real cash receipts from dairying in Canada have increased more than 50 percent. In the United States, real dairy cash receipts peaked in 1979 at 20 percent above the 1960 level, but then declined sharply. Thus, Canadian receipts in 1986 were 50 percent higher than in 1960, while U.S. dairy farms have real cash receipts similar to those in 1960.

The benefits of quotas to dairy producers in Canada were estimated at around Can\$1.0 billion in 1980. While current estimates are not available, the real price of a quota in Ontario has increased more than 300 percent since then. For farmers who remain in business, the improvement in income has been even greater, because the number of producers is continuously declining. For example, during 1967-86, the average real cash receipts per dairy farm in Canada increased 400 percent, while receipts in the United States increased only 150 percent.

Effects Hurt Low-Income Consumers, Help Large Farmers

The higher prices due to production and marketing controls affect low-income consumers the most, since they spend a larger proportion of their disposable income on food than high-income families do. This is especially significant for basic food commodities such as eggs and milk. The portion of income spent on eggs by the lowest income family group in Australia is six times greater than the portion spent by the highest income group.

Furthermore, the income transferred away from consumers is distributed disproportionately among producers, with more going to the big operators. This transfer is not subject to any payment limits. For example, during the 1981-82 season, the largest 4 percent of the egg producers in Australia received 37 percent of the income transferred, or Aus\$26.43 million. The average transfer per producer in that 4-percent group amounted to close to Aus\$300,000 per year. Thus, mandatory supply controls create an increased burden on low-income consumers and an increased benefit for large producers.

Controls Do Not Eliminate Government Spending

Even though mandatory supply control programs transfer most of the cost of supporting farm incomes directly to consumers, there still remain Government costs for storage, surplus removal, program enforcement, and direct subsidies. The Canadian Government has spent around Can\$250 million annually on dairy price supports since 1980.

Even higher government costs are evident when export subsidies are coupled with mandatory supply controls to prevent higher domestic prices from leading to a loss of exports. Despite its attempt to cut the cost of the dairy program by imposing quotas in 1984, the EC is still spending around \$6 billion per year on the program, 40 percent of that directly related to exports.

Under mandatory control programs, enforcement slip-ups and unanticipated production increases have in some cases led to surpluses that have had to be exported at large losses. In the EC, despite attempts to cut dairy production, dairy supplies still increased in 1985 and 1986. Therefore, export subsidies did not decline.

These EC subsidies are about 11 percent of the value of production. The subsidized exports also helped drive down world prices of dairy products, benefiting importers. Now, the EC must choose between two costly options: managing surpluses and subsidizing exports, or forcing a further reduction in the EC dairy herd.

Quotas Are Not Easy To Enforce

A successful mandatory supply control program requires strict guards over the quantity that reaches the market. Other countries have had mixed success in enforcing quota restrictions, depending on four major factors: (1) the number of producers, (2) the regional distribution of production, (3) whether the product is raw or processed, and (4) the enforcement tools used.

A mandatory supply control structure is in essence a legal grant of market power to a limited group of producers. But this limited group can still be large and hard to monitor. Even in a small country such as Israel, there are more than 3,000 egg producers.

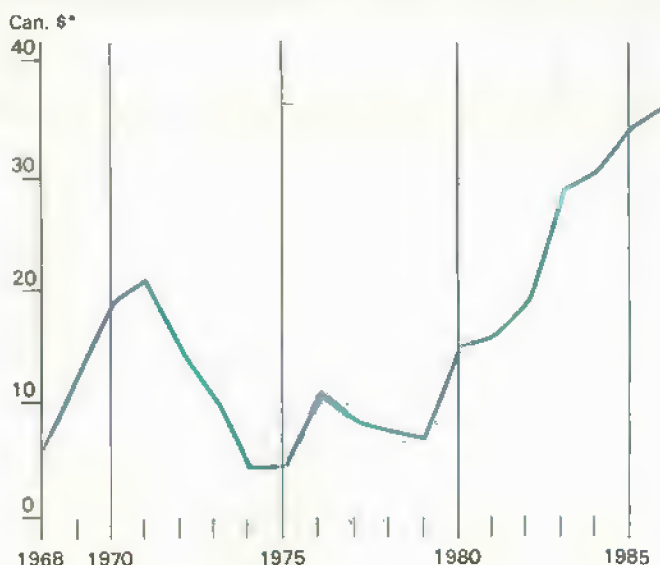
Australia's egg producers are fewer in number—1,800—but they are spread over a large geographical area, also making enforcement of controls difficult. If production is concentrated in a relatively small region, as are the U.S. tobacco and peanut industries, enforcement is easier.

Enforcement problems are greater for commodities that do not require significant processing. In both Australia and Israel, enforcement of production controls on eggs has had limited effectiveness because many egg farmers are involved in undetected direct trade. It is estimated that the illicit egg markets in those countries account for about 20 percent of total production.

In contrast, consumers are not likely to engage in direct trade for products requiring substantial processing, because the number of processors is normally small and they can be easily monitored. Enforcement does not seem to be a problem with fluid milk industries in Canada, Australia, and Israel.

Experience indicates that the more economic sanctions are used, the more effective the enforcement is. These sanctions take the form of levies on excess production, forced livestock sales, denying producers subsidies, rescission of

Price of Milk Quotas Traded in Ontario Is Rising



*1967 dollars per pound per day.
Source: Ontario Milk Marketing Board.

quotas, and curtailment of technical and marketing services. In Israel, the Government uses a carrot rather than a stick, giving a direct 25-percent subsidy to induce egg producers to sell through official traders.

One example of a successful enforcement system is the Canadian egg industry, which deals with a raw product but apparently has very little illicit production. The system includes stiff fines for overproduction, as well as periodic Federal and provincial counting of the hens held by the farmers. For example, in Ontario there is one provincial inspector per 125 egg producers. The total cost of administering the egg program to the federal Government is between Can\$4,000 and \$5,000 per producer per year. In addition, the Ontario government spends \$600 to \$700 per producer per year for inspections.

Mandatory Controls Are Difficult to Abolish

In countries where quotas are traded, they have become an integral part of producers' wealth. Thus, as demonstrated by the Australian egg industry, once mandatory supply control policies are adopted, the task of abolishing the quota structure is extremely difficult. This is because such step would reduce existing farmers' wealth and anticipated income. In many cases, quotas have apparently become a permanent part of agricultural sector. [Dan Dvoskin (202) 786-1403. Other contributors: Steve Blank, Sally Byrne, Richard Fallert, Carol Goodloe, Mike Kurtzig, Tom Lederer, Mary Anne Normile, Jane Porter, Jerry Sharples, and Dan Sumner.]

Statistical Indicators

Summary Data

Table 1.—Key statistical indicators of the food and fiber sector

	1986					1987			
	I	II	III	IV	Annual	I F	II F	III F	Annual F
Prices received by farmers (1977=100)	123	122	124	122	123	122	119	120	120
Livestock & Products	133	130	146	144	138	143	140	141	141
Crops	112	113	101	100	106	100	96	98	98
Prices paid by farmers, (1977=100)									
Prod. items	149	145	144	142	143	143	146	145	145
Commodities & services, int., taxes, & wages	163	161	159	158	159	159	160	161	160
Cash receipts (\$ bil) 1/	129	130	130	146	134	128	122	128	128-130
Livestock (\$ bil)	66	67	75	76	71	69	70	73	70-72
Crops (\$ bil)	63	64	55	70	63	59	52	55	57-59
Market Basket (1967=100)									
Retail cost	285	284	282	294	289	292	282	294	293
Farm value	226	222	244	243	234	232	231	237	235
Spread	319	320	319	324	321	327	327	327	327
Farm value/retail cost (%)	30	29	31	30	30	29	29	30	30
Retail prices (1967=100)									
Food	315	317	322	324	320	327	328	330	326-333
At home	302	302	308	310	305	313	313	314	311-317
Away-from home	354	359	362	366	360	367	371	375	371-378
Agricultural exports (\$ bil) 2/	7.4	5.7	5.5	7.5	26.3	7.1	5.8	5.5	26.0
Agricultural imports (\$ bil) 2/	5.6	5.4	5.0	5.1	20.9	5.3	5.0	4.6	20.0
Production:									
Red meat (mil lb)	9,551	10,021	9,720	9,752	39,051	9,507	9,452	9,531	38,090
Poultry (mil lb)	4,107	4,536	4,685	4,601	17,929	4,420	4,925	5,065	19,380
Eggs (mil doz)	1,422	1,421	1,413	1,457	5,715	1,435	1,430	1,425	5,765
Milk (bil lb)	36.2	38.4	35.6	33.9	144.1	34.7	37.3	35.4	141.4
Consumption, per capita:									
Red meat and poultry (lbs)	51.9	54.1	53.9	55.1	215.0	52.1	54.0	54.2	216.1
Corn beginning stocks (mil bu) 3/	8,614.7	6,587.1	4,980.0	4,039.5	4,039.5	10,304.1	8,246.8	--	5,240.0
Corn use (mil bu) 3/	2,028.9	1,599.4	956.5	1,890.1	6,900.0	2,057.6	--	--	--
Prices: 4/									
Choice steers--Omaha (\$/cwt)	57.22	54.52	58.91	60.36	57.75	60.50	63-67	61-67	61-65
Barrow and gilts--7 wks. (\$/cwt)	43.30	47.23	61.13	53.08	51.19	48.00	45-49	44-50	44-48
Broilers--12-city (cts/lb)	50.3	54.3	66.6	56.2	56.9	50.0	50-54	48-54	49-53
Eggs--Wt Gr. & large (cts/doz)	74.2	63.4	72.8	74.0	71.1	64.8	59-63	63-69	64-68
Milk--all at plant (\$/cwt)	12.37	11.97	12.30	13.30	12.48	12.93	11.85-12.15	12.10-12.50	12.35-12.75
Wheat--Kansas city HRW (\$/bu)	3.33	3.22	2.50	2.65	2.83	--	--	--	--
Corn--Chicago (\$/bu)	2.48	2.51	1.72	1.62	2.23	--	--	--	--
Soybeans--Chicago (\$/bu)	5.34	5.32	4.90	4.86	5.11	--	--	--	--
Cotton--Avg. spot mkt. (cts/lb)	60.0	63.9	42.0	48.0	53.5	--	--	--	--
	1979	1980	1981	1982	1983	1984	1985	1986 P	1987 F
Gross cash income (\$ bil)	135.1	143.3	146.0	150.6	150.2	154.9	156.2	150	149-151
Gross cash expenses (\$ bil)	101.7	109.1	113.2	113.8	113.0	115.6	112.1	106	102-104
Net cash income (\$ bil)	33.4	34.2	32.8	36.8	37.1	39.3	44.0	44	46-48
Net farm income (\$ bil)	27.4	16.1	26.9	22.7	13.0	32.7	30.5	29	31-33
Farm real estate value (1977=100)	125	145	158	157	148	146	128	112	103

1/ Quarterly data seasonally adjusted at annual rates. 2/ Annual data based on Oct.-Sept. fiscal years ending with year indicated.

3/ Dec.-Feb. first quarter; Mar.-May second quarter; June-Aug. third quarter; Sept.-Nov. fourth quarter; Sept.-Aug. annual. Use includes exports and domestic disappearance. 4/ Simple averages. F = forecast. P = preliminary.

U.S. and Foreign Economic Data

Table 2.—U.S. gross national product and related data

	Annual			1985		1986			
	1984	1985	1986 R	IV	I	II	III	IV R	
\$ billion (Quarterly data seasonally adjusted at annual rates)									
Gross national product	3,765.0	3,998.1	4,206.1	4,087.7	4,149.2	4,175.6	4,240.7	4,258.7	
Personal consumption expenditures	2,428.2	2,600.5	2,762.5	2,667.9	2,687.9	2,732.0	2,799.8	2,820.4	
Durable goods	331.2	359.3	388.1	362.0	360.8	373.9	414.5	403.1	
Nondurable goods	870.1	905.1	932.7	922.6	929.7	928.4	932.8	940.1	
Clothing & shoes	147.2	155.2	164.9	158.7	161.3	165.0	166.6	166.8	
Food & beverages	449.9	469.3	492.8	477.4	484.6	490.3	494.0	502.1	
Services	1,227.0	1,336.1	1,441.7	1,383.2	1,407.4	1,429.8	1,452.4	1,477.2	
Gross private domestic investment	662.1	661.1	683.6	669.5	708.3	687.3	675.8	663.2	
Fixed investment	598.0	650.0	677.0	672.6	664.4	672.8	680.3	690.3	
Change in business inventories	64.1	11.1	6.7	-3.1	43.8	14.5	-4.5	-27.1	
Net exports of goods & services	-58.7	-78.9	-104.3	-105.3	-93.7	-104.5	-108.9	-110.2	
Government purchases of goods & services	733.4	815.4	864.2	855.6	836.7	860.8	874.0	885.3	
1982 \$ billion (Quarterly data seasonally adjusted at annual rates)									
Gross national product	3,489.8	3,585.2	3,674.9	3,622.3	3,655.9	3,661.4	3,686.4	3,696.1	
Personal consumption expenditures	2,246.3	2,324.8	2,418.7	2,351.7	2,372.7	2,408.4	2,448.0	2,445.8	
Durable goods	318.9	343.8	368.6	347.0	345.4	357.1	391.6	380.4	
Nondurable goods	828.6	841.6	872.1	847.2	860.6	877.3	875.4	875.1	
Clothing & shoes	142.7	146.0	155.6	147.5	152.4	157.1	157.7	155.3	
Food & beverages	424.2	433.4	440.5	435.1	441.1	444.2	437.9	438.7	
Services	1,098.7	1,139.0	1,178.0	1,157.5	1,166.6	1,174.0	1,181.0	1,190.2	
Gross private domestic investment	652.0	647.7	657.2	653.2	684.0	664.7	651.3	629.0	
Fixed investment	592.8	638.6	650.7	658.4	644.1	648.6	651.6	657.4	
Change in business inventories	59.2	9.0	6.8	-5.2	39.9	15.1	-0.3	-28.5	
Net exports of goods & services	-83.6	-108.2	-147.8	-132.0	-125.9	-153.9	-163.3	-148.0	
Government purchases of goods & services	675.2	721.2	746.8	749.4	725.2	742.2	750.4	769.3	
GNP implicit price deflator									
% change	3.8	3.3	2.7	3.6	2.5	1.8	3.6	.7	
Disposable personal income (\$bil)	2,670.6	2,828.0	2,971.6	2,882.2	2,935.1	2,978.5	2,979.9	2,983.0	
Disposable per. income (1982 \$bil)	2,470.6	2,528.0	2,602.0	2,540.7	2,581.2	2,625.8	2,605.5	2,595.4	
Per capita disposable per. income (\$)	11,265	11,817	12,304	11,999	12,193	12,348	12,324	12,348	
Per capita dis. per. income (1982 \$)	10,421	10,563	10,773	10,577	10,723	10,886	10,776	10,708	
U.S. population, total, incl. military abroad (mil)	237.1	239.3	241.6	240.2	240.8	241.3	241.8	242.5	
Civilian population (mil)	234.9	237.0	239.4	238.0	238.5	239.1	239.6	240.2	
	Annual			1986			1987		
	1984	1985	1986 P	Feb	Nov	Dec	Jan	Feb	
Monthly data seasonally adjusted									
Industrial production (1977=100)	121.4	123.8	125.0	125.3	126.0	126.6	126.8	127.3	
Leading economic indicators (1967=100)	165.3	168.6	179.2	175.0	182.5	186.8	185.8	187.1	
Civilian employment (mil. persons)	105.0	107.2	109.8	108.6	110.4	110.6	111.0	111.4	
Civilian unemployment rate (%)	7.5	7.2	7.0	7.1	6.9	6.6	6.6	6.6	
Personal income (\$ bil annual rate)	3,110.2	3,314.5	3,485.7	3,435.3	3,523.3	3,542.7	3,548.9	3,581.3	
Money stock-M2 (daily avg) (\$bil) 1/	2,373.7	2,566.5	2,799.8	2,582.4	2,775.4	2,799.8	2,822.0	2,821.3	
Three-month Treasury bill rate (%)	9.58	7.48	5.98	7.03	5.35	5.49	5.45	5.59	
Asa corporate bond yield (Moody's) (%)	12.71	11.37	9.02	9.67	8.68	8.49	8.36	8.38	
Housing starts (thou) 2/	1,750	1,742	1,806	1,923	1,637	1,813	1,804	1,851	
Auto sales at retail, total (mil)	10.4	11.0	11.5	10.8	10.5	13.6	8.2	9.8	
Business inventory/sales ratio	1.34	1.37	1.37	1.37	1.35	1.31	1.36	--	
Sales of all retail stores (\$ bil)	107.8	114.5	117.8	117.1	121.1	126.9	117.5 P	122.3	
Nondurable goods stores (\$ bil)	68.9	71.6	71.6	73.0	74.0	74.8	74.6 P	75.6	
Food stores (\$ bil)	22.5	23.5	24.5	24.2	24.9	25.1	24.9 P	25.0	
Eating & drinking places (\$ bil)	10.4	10.9	11.7	11.3	12.1	12.5	12.6 P	12.8	
Apparel & accessory stores (\$ bil)	5.4	5.8	6.2	6.0	6.4	6.5	6.3 P	6.3	

1/ Annual data as of December of the year listed. 2/ Private, including farm. P = preliminary. R = revised.

Information contact: James Malley (202) 786-1283.

Table 3.—Foreign economic growth, inflation, and export earnings

	Average 1970-74	Average 1975-79	1980	1981	1982	1983	1984	1985	1986 est.
Annual percent change									
Total foreign									
Real GNP	5.8	3.7	2.6	1.6	1.7	2.0	3.2	2.8	2.6
CPI	10.2	14.0	16.7	15.8	14.4	18.7	21.3	21.0	11.2
Export earnings	27.5	14.6	22.6	-2.2	-6.8	-2.6	5.4	1.6	--
Developed less U.S.									
Real GNP	4.8	3.1	2.3	1.3	1.1	1.9	3.5	3.1	2.5
CPI	8.4	9.4	10.9	9.6	8.1	6.1	5.1	4.6	2.8
Export earnings	23.9	14.9	17.0	-3.3	-4.2	-0.5	6.1	4.9	19.4
Centrally planned									
Real GNP	5.1	3.5	1.5	2.1	2.7	3.4	3.7	3.0	3.4
Export earnings	19.4	16.1	16.5	3.4	6.0	8.2	1.5	-8.1	--
Latin America									
Real GNP	7.4	5.1	5.3	0.7	-0.5	-2.7	3.2	3.6	3.1
CPI	23.5	53.7	61.3	64.9	72.6	126.2	174.3	179.6	86.3
Export earnings	28.1	12.8	30.1	4.8	-9.7	-0.8	7.1	-5.3	--
Africa & Middle East									
Real GNP	8.9	6.4	1.3	0.0	1.4	0.1	0.2	0.6	-1.0
CPI	8.7	16.4	22.1	19.7	12.0	19.0	5.8	4.7	8.3
Export earnings	49.6	43.2	38.5	-7.0	-18.8	-17.2	-8.1	-8.8	--
Asia									
Real GNP	6.0	6.8	6.3	6.6	3.6	6.6	5.6	3.3	4.1
CPI	13.0	8.4	16.4	14.1	7.3	7.7	8.5	4.9	4.9
Export earnings	30.1	19.4	27.3	5.0	-0.6	3.8	13.5	-3.4	--

Information Contact: Timothy Baxter (202) 785-1688.

Farm Prices

Table 4.—Indexes of prices received and paid by farmers, U.S. average

	Annual			1986				1987		
	1984	1985	1986 P	Mar	Oct	Nov	Dec	Jan	Feb R	Mar P
1977=100										
Prices received										
All farm products	142	128	123	122	121	124	121	121	122	122
All crops	138	120	106	111	97	103	99	99	99	101
Food grains	144	133	109	135	92	97	99	100	102	102
Feed grains & hay	145	122	98	112	76	79	80	78	78	78
Feed grains	148	122	96	111	72	76	77	76	74	74
Cotton	108	93	81	96	78	89	90	84	79	85
Tobacco	153	154	138	143	130	131	131	130	131	131
Oil-bearing crops	109	84	77	79	72	76	76	72	72	72
Fruit, all	200	183	168	148	184	192	170	160	175	171
Fresh market 1/	218	196	176	154	193	203	177	166	182	178
Commercial vegetables	135	128	130	123	131	146	120	149	141	151
Fresh market	133	123	123	116	123	142	112	151	137	150
Potatoes & dry beans	157	125	114	94	113	119	125	126	126	131
Livestock & products	146	136	138	132	145	145	141	142	144	142
Meat animals	151	142	145	136	150	150	146	150	155	155
Dairy products	139	131	129	126	135	138	138	137	133	130
Poultry & eggs	135	119	128	125	139	135	124	118	115	111
Prices paid										
Commodities & services										
Interest, taxes, & wage rates	165	163	159	--	158	--	--	159	--	--
Production items	155	151	145	--	142	--	--	143	--	--
Feed	135	116	108	--	99	--	--	99	--	--
Feeder livestock	154	154	153	--	160	--	--	164	--	--
Seed	151	153	148	--	146	--	--	146	--	--
Fertilizer	143	135	124	--	116	--	--	116	--	--
Agricultural chemicals	128	128	127	--	126	--	--	126	--	--
Fuels & energy	201	201	162	--	150	--	--	158	--	--
Fare & motor supplies	147	146	144	--	143	--	--	143	--	--
autos & trucks	182	193	198	--	199	--	--	196	--	--
Tractors & self-propelled machinery	181	178	174	--	172	--	--	172	--	--
Other machinery	180	183	184	--	184	--	--	184	--	--
Building & fencing	138	136	136	--	136	--	--	136	--	--
Fare services & cash rent	149	150	150	--	150	--	--	148	--	--
Interest payable per acre on farm real estate debt	257	238	213	--	213	--	--	207	--	--
Taxes payable per acre on farm real estate	132	133	134	--	134	--	--	136	--	--
Wage rates (seasonally adjusted)	151	154	160	--	159	--	--	159	--	--
Production items, interest, taxes, & wage rates	162	157	151	--	149	--	--	149	--	--
Ratio, prices received to prices paid 2/	86	79	77	76	77	78	77	76	77	77
Prices received (1910-14=100)	650	586	561	557	555	568	551	552	558	557
Prices paid, etc. (Parity index) (1910-14=100)	1,132	1,120	1,087	--	1,089	--	--	1,081	--	--
Parity ratio (1910-14=100) 2/	58	52	51	--	51	--	--	50	--	--

1/ Fresh market for noncitrus; fresh market and processing for citrus. 2/ Ratio of index of prices received for all farm products to index of prices paid for commodities and services, interest, taxes, and wage rates. Ratio derived using the most recent prices paid index. Prices paid data will be published in January, April, July, and October. P = preliminary. R = revised.

Information contact: National Agricultural Statistics Service (202) 447-5446.

Table 5.—Prices received by farmers, U.S. average

	Annual*			1986				1987		
	1984	1985	1986 P	Mar	Oct	Nov	Dec	Jan	Feb R	Mar P
Crops										
All wheat (\$/bu)	3.46	3.20	2.71	3.28	2.30	2.43	2.49	2.53	2.58	2.57
Rice, rough (\$/cwt)	8.32	7.85	5.04	7.60	3.90	3.93	3.76	3.61	3.80	3.71
Corn (\$/bu)	3.05	2.49	1.96	2.29	1.40	1.47	1.50	1.47	1.42	1.41
Sorghum (\$/cwt)	4.60	3.97	3.11	3.67	2.35	2.38	2.41	2.37	2.36	2.49
All hay, baled (\$/ton)	75.40	69.90	61.90	67.10	57.40	56.50	57.20	55.40	58.10	57.90
Soybeans (\$/bu)	7.02	5.42	5.00	5.23	4.55	4.64	4.67	4.69	4.69	4.69
Cotton, Upland (cts/lb)	65.6	56.1	54.7	58.1	47.1	52.9	54.7	51.0	47.7	51.3
Potatoes (\$/cwt)	5.69	3.92	4.94	3.50	4.27	4.64	4.73	4.82	4.91	5.23
Lettuce (\$/cwt) 1/	11.00	10.90	11.20	8.92	8.31	12.00	11.00	14.80	9.05	13.60
Tomatoes (\$/cwt)	25.60	24.10	25.40	25.10	30.00	36.30	19.00	28.30	25.80	30.20
Onions (\$/cwt)	11.70	9.75	9.80	7.25	10.40	12.70	12.00	16.90	16.70	17.90
Dry edible beans (\$/cwt)	18.70	17.60	18.80	17.00	20.60	20.00	22.70	22.00	20.30	19.20
Apples for fresh use (cts/lb)	15.5	17.3	NA	17.2	20.1	18.5	17.9	17.9	19.5	19.6
Pears for fresh use (\$/ton)	300.00	349.00	396.00	389.00	419.00	396.00	390.00	376.00	407.00	403.00
Oranges, all uses (\$/box) 2/	5.95	7.41	4.18	3.85	4.47	6.58	4.59	4.24	4.75	4.79
Grapefruit, all uses (\$/box) 2/	2.68	4.01	4.21	3.94	6.29	4.19	4.54	4.50	4.55	4.76
Livestock										
Beef cattle (\$/cwt)	57.60	54.00	52.80	52.40	54.40	54.60	53.20	56.40	58.80	59.20
Calves (\$/cwt)	60.20	62.40	60.90	61.90	62.70	62.20	62.20	66.40	70.60	71.90
Hogs (\$/cwt)	47.60	43.90	50.10	40.40	53.10	52.80	50.60	47.20	48.20	46.70
Lambs (\$/cwt)	60.30	68.10	69.10	64.90	62.50	69.30	73.20	76.60	76.00	81.20
All milk, sold to plants (\$/cwt)	13.50	12.70	12.50	12.20	13.10	13.40	13.40	13.30	12.90	12.60
Milk, manuf. grade (\$/cwt)	12.49	11.72	11.50	11.30	12.10	12.30	12.30	12.00	11.60	11.50
Broilers (cts/lb)	33.2	30.2	34.7	30.2	40.7	34.9	30.6	31.1	30.1	29.1
Eggs (cts/doz) 3/	70.3	57.4	60.3	68.3	58.1	66.3	65.2	59.3	58.3	54.4
Turkeys (cts/lb)	46.6	47.2	44.2	36.9	52.6	51.5	41.5	34.9	35.3	37.6
Wool (cts/lb) 4/	79.5	63.3	66.0	61.9	68.2	62.3	62.0	57.0	59.6	71.0

1/ Due to program modifications, 1983 data not comparable with 1984 and 1985. 2/ Equivalent on-tree returns. 3/ Average of all eggs sold by producers including hatching eggs and eggs sold at retail. 4/ Average local market price, excluding incentive payments. *Calendar year averages, except for potatoes, dry edible beans, apples, oranges, and grapefruit, which are crop years. P = preliminary. R = revised. NA = not available.

Information contact: National Agricultural Statistics Service (202) 447-5446.

Producer and Consumer Prices

Table 6.—Consumer Price Index for all urban consumers, U.S. average (not seasonally adjusted)

	Annual			1986				1987 1/	
	1986	Feb	July	Aug	Sept	Oct	Nov	Dec	Jan
1967=100									
Consumer price index, all items	328.4	327.5	328.0	328.6	330.2	330.5	330.8	331.1	333.1
Consumer price index, less food	328.6	328.5	328.0	328.1	330.0	330.2	330.4	330.6	332.2
All food	319.7	315.3	320.1	322.7	323.2	323.7	324.6	325.2	328.9
Food away from home	360.1	354.2	360.8	361.8	363.3	364.0	365.8	367.1	368.6
Food at home	305.3	301.5	305.5	308.9	309.0	309.5	309.9	310.2	315.2
Meats 2/	273.9	268.4	272.9	279.8	283.6	283.9	285.4	286.3	288.6
Beef & veal	271.4	272.3	267.6	270.9	272.4	273.8	277.6	279.5	282.9
Pork	273.8	257.0	278.0	292.6	300.1	298.0	295.6	294.2	294.0
Poultry	232.7	218.5	240.3	255.0	249.5	247.8	245.2	241.9	238.4
Fish	443.2	430.6	447.3	446.3	447.2	451.6	449.7	457.6	478.0
Eggs	186.3	186.7	175.2	192.9	186.0	186.2	195.8	198.6	193.2
Dairy products 3/	258.4	257.3	258.4	258.3	258.5	260.0	261.2	262.2	263.3
Fats & oils 4/	287.8	291.4	287.3	287.8	285.6	284.6	285.4	286.0	293.2
Fresh fruit	369.3	353.3	382.2	391.5	384.1	375.1	360.6	355.8	389.1
Processed fruit 5/	163.3	165.7	161.8	162.3	161.9	162.0	162.0	163.1	165.7
Fresh vegetables	330.3	311.1	325.0	321.9	321.0	328.8	338.9	342.5	356.3
Potatoes	307.3	262.8	356.0	357.9	335.4	323.4	325.7	332.0	340.1
Processed vegetables 5/	147.4	147.6	148.4	148.5	146.8	146.2	146.5	147.4	150.2
Cereals & bakery products 5/	325.8	322.5	326.3	328.2	328.5	328.4	328.5	329.5	331.5
Sugar & sweets	411.1	408.6	412.4	413.1	413.7	413.4	412.4	411.8	415.8
Beverages, nonalcoholic	478.2	485.3	478.3	476.9	475.7	477.5	476.9	470.2	482.6
Apparel commodities less footwear	188.8	185.2	183.3	188.1	194.0	194.6	194.4	191.7	187.7
Footwear	211.2	207.9	209.1	209.6	212.0	215.1	215.1	214.0	209.9
Tobacco products	351.0	344.7	354.3	356.2	356.8	357.2	357.3	357.6	364.9
Beverages, alcoholic	239.7	238.3	240.4	240.1	240.4	240.6	240.5	240.8	242.5

1/ Beginning January 1987 the CPIs are calculated using 1982-84 expenditure patterns and updated population weights. The old series were based on 1972-73 expenditure patterns. 2/ Beef, veal, lamb, pork, and processed meat. 3/ Includes butter. 4/ Excludes butter. 5/ December 1977=100.

Information contact: Ralph Parlett (202) 786-1870.

Table 7.—Producer price indexes, U.S. average (not seasonally adjusted)

	Annual			1986					1987	
	1984	1985	1986 P	Feb	Sept	Oct R	Nov	Dec	Jan	Feb
	1967=100									
Finished goods 1/	291.1	293.7	289.6	291.9	287.3	290.7	290.7	289.9	291.7	282.3
Consumer foods	273.3	271.2	278.0	272.0	282.9	283.6	283.0	282.9	280.0	279.6
Fresh fruit	253.0	256.1	262.1	251.6	273.9	308.5	271.0	271.1	255.1	260.0
Fresh & dried vegetables	278.3	245.1	241.1	203.7	243.6	249.6	262.5	251.9	226.9	219.2
Dried fruit	386.6	363.5	377.4	369.2	377.9	383.2	387.3	384.8	383.6	384.8
Canned fruit & juice	312.4	323.1	315.1	313.4	311.8	310.8	314.8	320.5	322.1	321.6
Frozen fruit & juice	351.0	362.3	314.8	319.7	310.8	315.6	320.0	325.1	333.4	333.3
Fresh veg. excl. potatoes	219.1	205.8	204.0	169.6	202.4	204.3	214.1	206.1	174.9	167.1
Canned veg. and juices	252.6	246.9	245.1	243.6	248.2	243.5	245.3	246.8	246.4	247.8
Frozen vegetables	291.0	298.4	298.5	299.0	298.4	297.8	297.8	298.4	300.3	300.4
Potatoes	397.7	304.3	312.6	267.5	330.8	353.3	374.1	350.5	367.2	359.5
Eggs	210.8	171.0	177.9	176.0	181.1	173.5	197.4	194.0	176.9	175.6
Bakery products	299.1	313.7	321.3	319.5	323.1	322.6	322.5	321.1	322.2	320.7
Meats	236.8	227.8	235.2	223.1	251.9	246.7	244.0	243.6	238.2	237.0
Beef & veal	237.1	221.3	216.0	212.6	219.8	221.2	223.5	219.8	217.1	222.7
Pork	226.5	223.8	250.9	221.3	291.5	272.1	259.4	263.4	250.4	238.3
Processed poultry	206.0	187.3	207.8	188.5	223.0	233.7	213.3	200.5	194.6	189.5
Fish	476.0	484.2	530.4	527.9	527.5	526.2	544.1	569.4	604.7	632.9
Dairy products	251.7	249.4	248.8	246.2	250.3	252.0	253.5	254.4	253.9	252.8
Processed fruits & vegetables	294.3	296.3	287.9	287.0	288.4	287.0	289.4	292.0	293.9	294.4
Shortening & cooking oils	311.6	290.6	242.4	254.0	231.6	238.8	241.3	236.3	239.8	240.6
Consumer finished goods less foods	294.1	297.3	283.4	291.8	277.4	281.0	281.1	279.9	284.5	286.0
Beverages, alcoholic	209.8	213.0	217.8	216.7	218.1	219.0	218.0	218.3	217.5	218.4
Soft drinks	340.2	343.6	349.7	348.9	348.9	351.2	351.0	351.6	351.8	354.4
Apparel	201.3	204.1	206.5	205.6	206.8	207.1	207.4	206.7	207.5	207.4
Footwear	251.7	256.7	261.8	260.4	262.1	263.4	263.5	263.8	264.6	263.8
Tobacco products	398.4	428.1	460.4	451.5	469.2	469.3	469.3	469.3	487.1	487.5
Intermediate materials 2/	320.0	318.7	307.6	313.5	306.1	304.8	304.9	305.0	307.1	308.9
Materials for food manufacturing	271.1	258.8	250.9	249.2	254.3	253.9	253.2	253.0	251.0	250.6
Flour	185.2	183.0	173.4	182.9	162.3	165.1	164.4	164.5	164.6	168.8
Refined sugar 3/	173.5	165.6	166.4	165.1	167.5	168.4	168.6	169.1	169.2	169.1
Crude vegetable oils	262.2	219.6	135.8	153.8	121.6	119.0	124.2	122.8	127.1	128.9
Crude materials 4/	330.8	306.1	280.0	289.0	275.4	277.2	278.4	274.8	284.0	288.8
Foodstuffs & feedstuffs	258.5	235.0	230.6	227.2	233.5	235.0	235.9	232.8	227.1	229.2
Fruits & vegetables 5/	278.1	260.5	261.2	234.6	268.1	287.6	277.7	271.6	249.7	247.6
Grains	239.7	202.8	167.2	193.6	132.6	134.9	146.3	149.7	140.8	140.6
Livestock	251.8	229.9	236.1	226.1	253.1	247.3	247.1	244.5	238.3	245.3
Poultry, live	240.6	226.2	248.8	197.4	279.5	314.0	250.9	219.7	212.3	199.8
Fibers, plant & animal	228.4	197.8	179.3	198.4	107.9	150.8	154.0	176.7	192.3	188.9
Fluid milk	278.3	264.6	256.9	254.7	258.6	266.6	270.4	271.4	271.5	267.4
Oilseeds	253.3	202.7	196.2	187.1	187.2	183.6	208.9	196.3	202.1	201.5
Tobacco, leaf	274.6	274.1	243.0	255.5	239.6	229.1	230.8	230.8	229.1	230.8
Sugar, raw cane	312.0	291.3	292.2	288.0	293.2	296.9	299.0	294.4	299.7	304.8
All commodities	310.3	308.7	299.8	304.4	297.5	298.4	298.7	298.1	300.9	302.7
Industrial commodities	322.6	323.8	312.1	318.9	308.7	309.6	309.8	309.3	313.6	315.7
All foods 6/	269.2	264.6	268.4	262.8	273.2	274.0	273.2	273.1	270.0	269.7
Farm products &										
Processed foods & feeds	262.4	250.5	252.0	248.3	254.0	254.8	255.2	254.6	251.5	251.9
Farm products	255.8	230.5	224.7	221.8	224.1	227.4	229.3	226.8	220.2	221.2
Processed foods & feeds 6/	265.0	260.4	265.1	261.4	269.0	268.4	267.9	268.4	267.0	267.1
Cereal & bakery products	270.5	279.9	281.8	283.3	280.5	280.7	280.4	280.6	278.1	280.1
Sugar & confectionery	301.2	291.0	295.7	292.4	297.6	299.1	299.6	299.7	298.0	297.1
Beverages	273.1	276.6	294.3	294.1	292.1	293.3	292.5	292.8	289.4	289.5

1/ Commodities ready for sale to ultimate consumer. 2/ Commodities requiring further processing to become finished goods. 3/ All types and sizes of refined sugar. (Dec. 1977=100). 4/ Products entering market for the first time which have not been manufactured at that point. 5/ Fresh and dried. 6/ Includes all raw, intermediate, and processed foods (excludes soft drinks, alcoholic beverages, and manufactured animal feeds). (1977=100). R = revised. P = preliminary.

Information contact: Bureau of Labor Statistics (202) 523-1913.

Farm-Retail Price Spreads

Table 8.—Farm-retail price spreads

	Annual				1986					1987	
	1983	1984	1985	1986	Feb	Sept	Oct	Nov	Dec	Jan	Feb
Market basket 1/											
Retail cost (1967=100)	268.7	278.3	282.6	286.7	284.2	293.1	293.3	293.9	294.8	296.3	299.1
Farm value (1967=100)	242.3	266.4	237.2	234.1	223.7	245.9	244.7	244.8	241.3	232.0	233.5
Farm-retail spread (1967=100)	284.3	283.3	309.3	320.8	319.8	320.8	321.9	322.8	326.5	337.3	337.6
Farm value/retail cost (%)	23.4	32.8	31.1	30.0	29.1	31.1	30.9	30.8	30.3	28.8	28.9
Meat products											
Retail cost (1967=100)	267.2	268.1	265.5	273.9	268.4	283.6	283.9	285.4	286.3	288.3	285.3
Farm value (1967=100)	235.8	241.8	221.8	229.1	218.0	252.8	240.9	240.6	240.0	223.8	231.2
Farm-retail spread (1967=100)	304.0	299.1	316.6	326.2	327.5	318.7	334.2	337.8	340.5	363.9	348.5
Farm value/retail cost (%)	47.8	48.8	48.1	45.1	43.8	48.1	45.8	45.5	45.2	41.8	43.7
Dairy products											
Retail cost (1967=100)	250.0	263.2	258.0	258.4	257.3	258.5	260.0	261.2	262.2	263.2	264.3
Farm value (1967=100)	262.1	258.8	248.2	241.5	237.6	243.8	250.4	251.9	254.4	262.0	253.6
Farm-retail spread (1967=100)	239.3	249.3	266.8	273.3	274.6	271.4	268.5	269.3	269.0	273.0	273.7
Farm value/retail cost (%)	49.0	47.8	45.0	43.7	43.2	44.1	45.0	45.1	45.4	44.8	44.9
Poultry											
Retail cost (1967=100)	187.8	218.8	216.4	232.7	218.5	249.5	247.8	245.2	241.9	238.3	237.0
Farm value (1967=100)	213.0	249.9	234.8	255.4	212.5	282.2	300.4	266.6	228.4	221.7	216.7
Farm-retail spread (1967=100)	182.4	188.1	198.4	210.9	224.3	217.8	196.9	224.5	255.0	254.4	256.6
Farm value/retail cost (%)	93.1	96.3	93.4	94.0	47.8	55.8	59.6	53.8	46.4	45.8	45.0
Eggs											
Retail cost (1967=100)	187.1	208.0	174.3	186.3	186.7	186.0	186.2	185.8	188.6	193.5	187.2
Farm value (1967=100)	206.1	230.3	178.9	192.7	192.1	198.3	179.9	214.3	208.8	184.4	179.2
Farm-retail spread (1967=100)	159.5	178.2	167.6	177.1	178.9	168.3	195.3	169.0	183.9	206.5	198.8
Farm value/retail cost (%)	85.1	65.1	60.7	61.1	60.8	63.0	57.1	64.7	62.1	56.3	56.6
Cereal & bakery products											
Retail cost (1967=100)	292.5	305.3	317.0	325.8	322.5	328.5	328.4	328.5	329.5	331.2	332.3
Farm value (1967=100)	186.8	192.0	175.8	142.3	162.3	121.7	124.8	128.7	127.0	128.4	128.6
Farm-retail spread (1967=100)	314.0	326.7	346.2	363.7	355.7	371.3	370.5	370.5	371.4	373.2	374.5
Farm value/retail cost (%)	11.1	10.8	8.5	7.5	8.6	6.4	6.5	6.6	6.6	6.7	6.6
Fresh fruits											
Retail cost (1967=100)	303.6	345.3	383.5	390.1	372.1	407.7	398.2	381.6	379.8	412.2	427.1
Farm value (1967=100)	220.8	315.1	302.7	285.3	268.8	291.4	303.1	305.6	309.5	283.0	289.8
Farm-retail spread (1967=100)	340.8	358.9	418.8	437.1	418.0	459.9	440.9	418.7	411.3	470.2	488.7
Farm value/retail cost (%)	22.8	28.3	24.4	22.7	22.5	22.1	23.6	24.8	25.2	21.3	21.0
Fresh vegetables											
Retail cost (1967=100)	299.3	331.8	317.5	330.3	311.1	321.0	328.8	338.9	342.5	355.4	374.4
Farm value (1967=100)	287.4	298.7	256.7	247.8	179.0	267.0	273.3	298.4	240.8	310.9	266.8
Farm-retail spread (1967=100)	314.3	347.4	346.1	369.2	373.2	346.4	354.9	357.5	390.3	376.3	425.0
Farm value/retail cost (%)	28.6	28.8	25.8	24.0	18.4	266.0	26.6	28.2	27.0	28.0	22.8
Processed fruits & vegetables											
Retail cost (1967=100)	286.8	306.1	214.1	309.1	311.6	307.3	306.6	306.8	308.8	314.4	313.0
Farm value (1967=100)	300.5	343.5	378.5	326.3	330.5	315.3	332.5	332.1	344.3	358.7	358.3
Farm-retail spread (1967=100)	286.2	397.8	299.9	305.3	307.4	305.5	300.9	301.3	300.9	304.6	303.0
Farm value/retail cost (%)	18.8	20.3	21.8	19.1	19.2	18.6	19.7	19.6	20.2	20.7	20.8
Fats & oils											
Retail cost (1967=100)	263.1	288.0	294.4	287.8	291.4	285.6	284.6	285.4	286.0	293.4	289.9
Farm value (1967=100)	251.0	324.8	271.3	199.1	215.4	178.7	186.2	181.5	184.1	198.9	199.0
Farm-retail spread (1967=100)	267.8	273.8	303.3	321.9	320.6	326.7	322.5	328.3	325.2	328.8	328.7
Farm value/retail cost (%)	26.5	31.3	25.6	19.4	20.5	17.4	18.2	17.7	17.9	18.8	18.1

	Annual				1986					1987	
	1983	1984	1985	1986	Feb	Sept	Oct	Nov	Dec	Jan	Feb
Beef, Choice											
Retail price 2/ (cts/lb)	238.1	239.6	232.6	230.7	232.5	231.0	231.2	233.8	234.8	236.6	233.6
Net carcass value 3/ (cts)	145.4	147.5	135.2	133.1	130.0	135.8	137.1	141.7	136.3	134.0	137.5
Net farm value 4/ (cts)	136.2	140.0	126.8	124.4	121.0	128.0	128.9	134.1	128.3	125.7	131.7
Farm-retail spread (cts)	101.9	99.6	105.8	106.3	111.5	102.0	102.3	99.7	106.5	110.9	101.9
Carcass-retail spread 5/ (cts)	82.7	82.0	87.4	87.6	102.5	95.2	94.1	92.1	98.5	102.6	96.1
Farm-carcass spread 6/ (cts)	8.2	7.8	8.4	8.7	9.0	6.8	8.2	7.6	8.0	8.3	8.8
Farm value/retail price (%)	57	58	55	54	52	56	56	57	55	53	56
Pork											
Retail price 2/ (cts/lb)	159.8	162.0	162.0	178.4	168.3	194.4	194.9	192.5	191.3	188.1	185.6
Wholesale value 3/ (cts)	108.8	110.1	101.1	110.9	95.7	127.3	118.5	118.4	113.5	105.4	103.8
Net farm value 4/ (cts)	75.5	77.4	71.4	82.4	69.5	95.7	86.7	86.1	81.4	78.7	77.8
Farm-retail spread (cts)	83.3	84.5	90.6	96.0	98.8	98.7	108.2	106.4	109.9	112.4	107.8
Wholesale-retail spread 5/ (cts)	60.9	61.9	60.8	67.5	72.6	67.1	76.4	74.1	77.8	82.7	81.8
Farm-wholesale spread 6/ (cts)	32.4	32.7	29.7	28.5	26.2	31.6	31.8	32.3	32.1	29.7	26.0
Farm value/retail price (%)	45	48	44	46	41	49	44	45	43	40	42

1/ Retail costs are based on indexes of retail prices for domestically produced farm foods from the CPI-U published monthly by the Bureau of Labor Statistics. The farm value is the payment to farmers for quantity of farm product equivalent to retail unit, less allowance for byproduct. Farm values are based on prices at first point of sale and may include marketing charges such as grading and packing for some commodities. The farm-retail spread, the difference between the retail price and the farm value, represents charges for assembling, processing, transporting, and distributing these foods. 2/ Estimated weighted average price of retail cuts from pork and choice yield grade 3 beef carcasses. Retail cut prices from SLS. 3/ Value of carcass quantity (beef) and wholesale cuts (pork) equivalent to 1 lb. of retail cuts; beef adjusted for value of fat and bone byproducts. 4/ Market value to producer for quantity of live animal equivalent to 1 lb. of retail cuts since value of byproducts. 5/ Represents charges for retailing and other marketing services such as fabricating, wholesaling, and in-city transportation. 6/ Represents charges made for livestock marketing, processing, and transportation to city where consumed.

Note: Annual historical data on farm-retail price spreads may be found in Food Consumption, Prices, and Expenditures, Statistical Bulletin 734, ERS, USDA.

Information contacts: Denis Dunham (202) 786-1870; Ron Gustafson (202) 786-1830.

Table 9.—Price Indexes of food marketing costs

(See the March 1987 issue.)

Information contact: Denis Dunham (202) 786-1870.

Table 10.—U.S. meat supply and use

Item	Sag. stock	Pro- duc- tion 1/	Im- ports	Total supply	Ex- ports	Ship- ments	Milli- tery con- sump- tion	Ending stocks	Civilian consumption		Primary market price 3/
									Total	Per Capita 2/ Pounds	
Pounds											
Beef:											
1984	325	23,598	1,823	25,746	329	47	112	358	24,900	78.5	65.34
1985	358	23,728	2,071	26,157	328	51	115	317	25,346	79.1	58.37
1986	317	24,371	2,101	26,789	507	52	110	311	25,809	79.8	57.75
1987 F	311	22,948	2,150	25,409	525	60	110	325	24,389	74.7	61-65
Pork:											
1984	301	14,812	954	16,067	164	147	86	274	15,396	61.8	48.86
1985	274	14,807	1,128	16,209	128	131	70	229	15,651	62.1	44.77
1986	229	14,063	1,107	15,399	85	132	73	197	14,912	58.6	51.19
1987 F	187	14,615	1,100	15,912	100	140	80	225	15,367	59.8	44-48
Veal:											
1984	9	495	24	528	6	1	4	14	503	1.8	60.24
1985	14	515	20	549	4	1	7	11	526	1.8	62.42
1986	11	824	27	562	5	1	6	7	543	1.9	60.89
1987 F	7	455	25	487	4	1	7	7	468	1.6	67-71
Lamb and mutton:											
1984	11	379	20	410	2	3	0	7	398	1.5	62.18
1985	7	358	36	401	1	2	0	13	385	1.4	68.61
1986	13	338	39	390	1	1	0	12	375	1.4	69.46
1987 F	12	317	40	369	2	1	0	8	358	1.3	74-78
Total red meat:											
1984	646	39,284	2,821	42,751	501	188	202	653	41,197	143.6	NA
1985	653	39,408	3,255	43,316	461	185	192	570	41,908	144.5	NA
1986	570	39,296	3,274	43,140	598	187	189	527	41,639	141.6	NA
1987 F	527	38,090	3,315	42,177	631	202	197	565	40,582	137.4	NA
Broilers:											
1984	21	13,016	0	13,038	407	145	34	20	12,432	52.9	55.6
1985	20	13,762	0	13,781	417	143	34	27	13,161	55.5	50.8
1986	27	14,450	0	14,477	554	149	35	24	13,715	57.3	56.9
1987 F	24	15,476	0	15,500	700	140	36	25	14,599	60.4	49-53
Mature chicken:											
1984	82	672	0	764	26	2	2	119	615	2.6	NA
1985	119	636	0	755	21	1	2	144	587	2.5	NA
1986	144	671	0	815	16	3	2	163	631	2.6	NA
1987 F	163	640	0	803	20	4	1	130	648	2.7	NA
Turkeys:											
1984	162	2,685	0	2,847	27	7	13	125	2,676	11.4	74.4
1985	125	2,942	0	3,067	27	7	13	150	2,870	12.1	75.5
1986	150	3,287	0	3,437	25	4	10	178	3,220	13.4	72.2
1987 F	178	3,799	0	3,977	25	4	16	150	3,772	15.6	64-68
Total poultry:											
1984	275	16,373	0	16,648	460	153	49	264	15,722	66.9	NA
1985	264	17,339	0	17,604	465	151	49	321	16,618	70.1	NA
1986	321	18,408	0	18,729	595	156	47	365	17,565	73.4	NA
1987 F	365	19,915	0	20,280	745	148	53	305	19,029	78.7	NA
Red meat & poultry:											
1984	921	55,657	2,821	59,399	961	351	251	917	56,919	210.5	NA
1985	917	56,747	3,255	60,920	926	336	241	891	58,526	214.6	NA
1986	891	57,704	3,274	61,869	1,193	343	236	892	59,205	215.0	NA
1987 F	892	58,520	3,315	62,457	1,376	350	250	870	59,611	216.0	NA

1/ Total including farm production for red meats and federally inspected plus non-federally inspected for poultry. 2/ Retail weight basis. 3/ Dollars per cut for red meat; cents per pound for poultry. Beef: choice steers, Omaha 900-1,100 lbs.; pork: barrows and gilts, 7 weeks; veal: farm price of calves; lamb and mutton: choice slaughter lambs, San Angelo; broilers: wholesale 12-city average; turkeys: wholesale NY 8-16 lb. young hens. 4/ Carcass weight for red meats and certified ready-to-cook for poultry.
NA = not available. F = forecast.

Information contact: Ron Gustafson, Leland Southard, or Allen Baker (202) 786-1830.

Table 11.—U.S. egg supply and use

	Beg. stocks	Pro- duc- tion	Im- ports	Total supply	Ex- ports	Ship- ments	Mili- tary use	Hatch- ing use	Ending stocks	Civilian consumption		Wholesale price*
										Total	Per capita	
Million dozen												
1982	17.5	5,801.9	2.5	5,821.8	158.2	26.7	22.4	505.6	20.3	5,088.6	265.1	70.1
1983	20.3	5,659.2	23.4	5,703.0	85.8	26.6	25.1	500.0	9.3	5,056.2	260.8	75.2
1984	9.3	5,708.2	32.0	5,749.5	58.2	27.8	17.6	529.7	11.1	5,105.1	260.9	80.9
1985	11.1	5,688.4	12.7	5,712.2	70.6	30.3	20.2	548.1	10.7	5,032.2	254.7	66.4
1986	10.7	5,715.0	13.6	5,739.4	101.0	28.0	17.5	565.5	10.4	5,017.0	251.5	71.1
1987 F	10.5	5,765.0	12.0	5,787.5	100.0	24.0	20.0	600.0	10.0	5,033.5	249.9	62-69

* Cantoned Grade A large eggs in New York. F = forecast.

Information contact: Allen Baker (202) 786-1830.

Table 12.—U.S. milk supply and use¹

Calendar year	Pro-duction	Farm use	Commercial		Im-ports	Total commercial supply	CCC net re-movals	Commercial		All milk price 2/
			Farm market-ings	Beg. stocks				Ending stocks	Disap-pear-ance	
			Billion pounds							
1980	128.4	2.4	126.1	5.4	2.1	133.6	8.8	5.8	119.0	13.05
1981	132.8	2.3	130.5	5.8	2.3	138.5	12.9	5.4	120.3	13.77
1982	135.5	2.4	133.1	5.4	2.5	141.0	14.3	4.6	122.1	13.61
1983	139.7	2.4	137.3	4.6	2.6	144.5	16.8	5.2	122.5	13.58
1984	135.4	2.9	132.5	5.2	2.7	140.5	8.6	4.9	126.9	13.46
1985	143.1	2.5	140.7	4.9	2.8	148.4	13.2	4.6	130.6	12.75
1986 P	144.1	2.3	141.8	4.6	2.7	149.0	10.6	4.2	134.2	12.48
1987 F	141.5	2.3	139.2	4.2	2.7	146.1	5.5	4.4	136.2	12.50

1/ Milkfat basis. Totals may not add because of rounding. 2/ Delivered to plants and dealers; does not reflect deductions. P = preliminary. F = forecast.

Information contact: Jim Miller (202) 786-1830.

Table 13.—Poultry and eggs

	Annual			1986					1987	
	1984	1985	1986	Feb	Sept	Oct	Nov	Dec	Jan	Feb
Broilers										
Federally inspected slaughter, certified (all lb)	12,998.6	13,569.2	14,265.6	1,087.0	1,241.6	1,255.7	1,050.4	1,252.2	1,275.3	1,155.6
Wholesale Price, 12-city, (cts/lb)	55.6	50.8	56.91	49.0	61.0	62.5	57.5	50.0	51.8	49.8
Price of grower feed (\$/ton)	233	197	NA	189	NA	177	NA	NA	174	NA
Broiler-feed price ratio 1/	2.8	3.1	NA	3.1	NA	4.6	NA	NA	3.6	NA
Stocks beginning of period (mil lb)	21.2	19.7	26.6	26.6	24.3	26.0	25.6	22.5	23.9	27.2
Broiler-type chicks hatched (mil) 2/	4,593.9	4,803.8	5,008.0	364.5	380.1	382.6	379.1	416.5	439.6	406.2
Turkeys										
Federally inspected slaughter, certified (mil lb)	2,574	2,800	3,132	174.6	332.4	364.8	307.1	248.0	215.4	211.8
Wholesale price, New York, 8-16 lb. young hens (cts/lb)	74.4	75.5	72.2	61.7	81.2	83.2	80.7	71.1	55.3	58.5
Price of turkey grower feed (\$/ton)	245	212	NA	211	NA	215	NA	NA	210	NA
Turkey-feed price ratio 1/	3.8	4.4	NA	3.5	NA	4.9	NA	NA	3.3	NA
Stocks beginning of period (mil lb)	161.8	125.3	150.2	156.8	449.3	511.6	543.3	249.6	178.6	198.3
Poultz placed in U.S. (mil)	190.0	197.8	225.4	18.6	13.6	14.2	13.8	17.7	21.1	21.0
Eggs										
Farm production (mil)	68,498	68,261	68,590	5,302	5,548	5,797	5,729	5,860	5,920	5,350
Average number of layers (mil) 3/	278	277	278	233	229	231	233	235	237	236
Rate of lay (eggs per layer on farms) 3/	245	247	247	19.0	20.3	20.8	20.5	21.3	20.8	19.0
Cartoned Price, New York, grade A large (cts/doz) 4/	80.8	66.4	71.1	68.3	72.6	69.6	77.2	75.5	67.1	65.2
Price of laying feed (\$/ton)	206	182	NA	179	NA	166	NA	NA	164	NA
Egg-feed price ratio 1/	6.8	6.3	NA	6.8	NA	7.0	NA	NA	7.2	NA
Stocks, first of month										
Shell (mil doz)	.39	.93	.72	.84	.99	.87	.66	.87	.66	.60
Frozen (mil doz)	8.8	10.2	10.0	9.6	11.4	10.6	10.6	9.9	9.8	10.9
Replacement chicks hatched (mil)	459	407	425	28.4	33.6	33.6	33.6	34.6	34.2	35.2

1/ Pounds of feed equal in value to 1 dozen eggs or 1 lb. of broiler or turkey liveweight. 2/ Placement of broiler chicks are currently reported for 12 states only; henceforth, hatch of broiler-type chicks will be used as a substitute. 3/ Monthly data only available for 20 states. 4/ Price of cartoned eggs to volume buyers for delivery to retailers. NA = not available.

Information contact: Allen Baker (202) 786-1830.

Table 14.—Dairy

	Annual			1986					1987	
	1984	1985	1986	Feb	Sept	Oct	Nov	Dec	Jan	Feb
Milk prices, Minnesota-Wisconsin, 3.5% fat (\$/cwt) 1/	12.29	11.48	11.30	11.04	11.55	11.69	11.91	11.88	11.70	11.27
Wholesale Prices										
Butter, Grade A Cht. (cts/lb)	148.8	141.1	144.5	138.7	154.2	153.5	151.9	145.5	137.3	136.7
Am. cheese, Mto. assembly pt. (cts/lb)	138.0	127.7	127.3	124.5	129.7	130.2	133.4	130.4	127.7	122.5
Nonfat dry milk. (cts/lb) 2/	80.9	84.0	80.6	80.1	80.6	81.2	82.0	81.4	82.0	79.0
USDA net removals										
Total milk equiv. (mil lb) 3/	8,637.0	13,174.1	10,628.1	2,250.1	172.2	90.1	7.7	390.1	1,201.3	862.8
Butter (mil lb)	202.3	334.2	287.6	79.8	-1.5	-1.1	-1.6	9.6	45.1	31.1
Am. cheese (mil lb)	447.3	629.0	468.4	60.5	17.9	8.7	3.0	19.0	26.7	21.8
Nonfat dry milk (mil lb)	678.4	940.6	827.3	100.0	41.0	22.3	24.3	46.8	49.9	41.2
Milk										
Milk prod. 21 states (mil lb)	114,545	121,043	122,185	9,565	9,662	9,732	9,400	9,717	9,932	9,279
Milk per cow (lb)	12,691	13,160	13,445	1,028	1,080	1,090	1,056	1,095	1,123	1,052
Number of milk cows (thou)	9,026	9,198	9,088	9,303	8,950	8,932	8,900	8,873	8,845	8,818
U.S. milk production (mil lb)	135,450	143,147	144,080	6/11,322	6/11,361	6/11,460	6/11,057	6/11,430	6/11,675	6/10,925
Stock, beginning										
Total (mil lb)	22,646	16,704	13,695	13,646	17,169	16,022	15,089	13,994	12,867	12,939
Commercial (mil lb)	5,234	4,937	4,590	4,760	5,348	5,114	4,823	4,342	4,165	4,480
Government (mil lb)	17,412	11,767	9,105	9,230	11,822	10,907	10,266	9,652	8,702	8,459
Imports, total (mil lb) 3/	2,741	2,777	2,676	179	214	273	277	266	234	NA
Commercial disappearance milk equiv. (mil lb)	126,912	130,630	134,233	8,921	11,447	11,737	11,617	11,286	10,196	NA
Butter										
Production (mil lb)	1,103.3	1,247.8	1,207.6	119.4	79.2	84.6	84.0	100.9	109.2	97.8
Stocks, beginning (mil lb)	499.4	296.5	205.5	206.3	304.4	279.6	253.3	218.5	193.0	202.6
Commercial disappearance (mil lb)	902.7	918.2	928.0	34.9	80.8	83.3	95.1	93.9	59.0	NA
American cheese										
Production (mil lb)	2,648.5	2,854.4	2,834.3	227.2	201.7	207.1	195.5	222.9	219.5	211.2
Stocks, beginning (mil lb)	1,161.5	960.5	850.2	810.8	827.5	866.9	819.3	770.8	697.1	674.2
Commercial disappearance (mil lb)	2,253.6	2,278.3	2,417.6	164.4	205.2	224.4	216.9	215.5	179.1	NA
Other cheese										
Production (mil lb)	2,025.5	2,170.5	2,391.5	171.6	213.1	218.3	202.1	212.9	194.0	189.7
Stocks, beginning (mil lb)	104.9	101.4	94.1	93.8	100.2	99.1	93.8	91.5	92.0	93.5
Commercial disappearance (mil lb)	2,310.9	2,460.5	2,662.0	189.5	238.0	251.8	236.1	242.3	206.5	NA
Nonfat dry milk										
Production (mil lb)	1,160.7	1,390.0	1,297.8	114.7	75.2	68.7	68.2	90.4	82.1	80.3
Stocks, beginning (mil lb)	1,405.2	1,247.6	1,011.1	981.4	934.4	844.9	793.4	742.6	686.8	596.6
Commercial disappearance (mil lb)	497.8	435.0	492.9	20.0	47.3	58.6	40.2	29.8	34.8	NA
Frozen dessert										
Production (mil gal) 4/	1,241.8	1,249.0	1,273.6	87.2	107.0	99.1	81.4	81.7	79.9	90.0

	Annual			1985		1986			1987	
	1984	1985	1986	III	IV	I	II	III	IV	I P
Milk production (mil lb)	135,450	143,147	144,080	36,685	35,424	36,172	38,350	35,610	33,947	34,700
Milk per cow (lb)	12,506	12,994	13,293	3,305	3,174	3,251	3,505	3,327	3,208	3,310
No. of milk cows (thou)	10,833	11,016	10,839	11,099	11,162	11,126	10,943	10,703	10,583	10,480
Milk-feed price ratio 5/	1.59	1.72	1.74	1.68	1.76	1.73	1.63	1.71	1.90	1.92
Returns over concentrate 5/ costs (\$/cwt milk)	9.52	9.54	9.20	9.13	9.61	9.37	8.50	8.88	10.05	9.90

1/ Manufacturing grade milk. 2/ Prices paid f.o.b. Central States production area, high heat spray process.
3/ Milk-equivalent, fat-basis. 4/ Ice cream, ice milk, and hard sherbet. 5/ Based on average milk price after adjustment for price-support deductions. 6/ Estimated. P = preliminary. NA = not available.

Information contact: Jim Miller (202) 786-1830.

Table 15.—Wool

	Annual			1986					1987	
	1984	1985	1986	Feb	Sept	Oct	Nov	Dec	Jan	Feb
U.S. wool price, Boston 1/ (cts/lb)	229	192	191	189	190	190	190	190	193	202
Imported wool price, Boston 2/ (cts/lb)	241	197	201	202	184	190	199	208	211	212
U.S. mill consumption, scoured										
Apparel wool (thou lb)	128,982	106,051	134,989	11,126	9,956	11,820	9,947	10,788	11,053	12,183
Carpet wool (thou lb)	13,088	10,562	10,500	798	982	1,035	780	567	728	813

1/ Wool price delivered at U.S. mills, clean basis, Graded Territory 64's (20.60-22.04 microns) staple 2-3/4" and up. 2/ Wool price delivered at U.S. mills, clean basis, Australian 60/62's, type 64A (24 micron). Outy since 1982 has been 10.0 cents.

Information contact: John Lawler (202) 786-1840.

Table 16.—Meat animals

	Annual			1986					1987	
	1984	1985	1986	Feb	Sept	Oct	Nov	Dec	Jan	Feb
Cattle on feed (17-States)										
Number on feed (thou head) 1/	8,006	8,635	7,820	7,322	6,404	6,811	7,546	7,826	7,633	7,128
Placed on feed (thou head)	20,772	19,346	20,005	1,220	2,103	2,403	1,814	1,405	1,561	1,407
Marketings (thou head)	18,785	18,989	19,243	1,470	1,637	1,587	1,447	1,494	1,773	1,463
Other disappearance (thou head)	1,376	1,132	1,049	92	59	81	87	104	127	110
Beef steer-corn Price ratio,										
Omaha 2/	21.6	23.3	31.0	24.4	42.4	42.5	40.3	38.9	40.5	44.0
Hog-corn price ratio, Omaha 2/	16.1	17.8	27.8	19.0	42.9	39.0	35.6	33.4	32.7	35.1
Market prices (\$ per cwt)										
Slaughter cattle:										
Choice steers, Omaha	65.34	58.37	57.75	56.42	59.43	59.73	61.54	59.82	58.79	61.02
Utility cows, Omaha	39.81	38.32	37.19	37.62	38.42	37.32	35.88	35.48	39.79	42.29
Choice vealers, S. St. Paul	63.95	58.28	59.92	52.50	67.50	67.50	67.50	67.50	65.94	68.28
Feeder cattle:										
Choice, Kansas City, 600-700 lb.	65.28	64.56	62.79	62.42	65.50	65.10	64.13	65.00	69.00	71.38
Slaughter hogs:										
Barrows & gilts, 7-markets	48.86	44.77	51.19	43.55	59.01	54.21	53.62	51.42	47.39	48.73
Feeder pigs:										
S. Mo., 40-50 lb. (per head)	39.12	37.20	45.62	37.26	59.63	53.23	50.00	47.69	47.00	53.96
Slaughter sheep & lambs:										
Lambs, Choice, San Angelo	62.18	68.61	69.46	67.50	66.38	59.65	65.42	73.33	78.56	75.75
Ewes, Good, San Angelo	20.80	34.02	34.78	31.88	29.38	36.85	37.58	38.00	39.81	41.25
Feeder lambs:										
Choice, San Angelo	61.02	85.91	73.14	75.12	83.88	81.45	83.50	89.92	95.88	99.50
Wholesale meat prices, Midwest										
Choice steer beef, 600-700 lb.	98.01	90.76	88.98	86.82	90.50	91.80	95.70	92.04	89.70	91.69
Canner & Cutter cow beef	74.70	74.13	71.31	72.92	72.60	71.44	68.82	68.58	77.92	80.89
Pork loins, 8-14 lb. 3/	86.36	81.51	104.78	91.75	118.84	109.81	100.13	102.30	98.29	99.40
Pork bellies, 12-14 lb.	60.08	59.50	65.82	51.50	75.64	60.32	63.30	64.72	66.32	57.81
Hams, skinned, 14-17 lb.	78.22	67.50	80.01	63.00	88.98	105.20	109.40	87.43	65.75	65.43
Commercial slaughter (thou head)*										
Cattle	37,582	36,293	37,292	2,715	3,128	3,285	2,819	3,076	3,199	2,662
Steers	17,474	16,912	17,519	1,270	1,499	1,586	1,291	1,399	1,531	1,284
Heifers	10,691	11,237	11,098	851	857	931	792	875	1,005	824
Cows	8,617	7,387	7,960	546	608	463	679	746	608	503
Bulls & stags	789	758	715	48	64	65	57	56	55	51
Calves	3,297	3,385	3,407	272	281	295	255	289	263	239
Sheep & lambs	6,759	6,165	5,632	452	511	511	413	454	428	400
Hogs	85,168	84,482	79,504	6,337	6,502	7,240	6,239	6,792	6,917	6,055
Commercial Production (all lb.)										
Beef	23,418	23,557	24,215	1,769	2,050	2,146	1,808	1,971	2,102	1,747
Veal	479	499	510	40	43	44	37	41	39	36
Lamb & mutton	371	352	330	27	30	30	24	27	25	24
Pork	14,720	14,728	13,883	1,106	1,137	1,279	1,115	1,220	1,244	1,070

	Annual			1985		1986				1987	
	1984	1985	1986	IV	I	II	III	IV	I	II	
Cattle on feed (13-States)											
Number on feed (thou head) 1/	9,908	10,653	9,754	7,937	8,754	8,945	7,970	8,197	8,235	---	
Placed on feed (thou head)	24,917	23,326	23,549	7,365	5,270	5,221	6,336	6,726	---	---	
Marketings (thou head)	22,540	22,887	22,836	5,224	5,763	5,821	5,876	5,376	5/	5,569	
Other disappearance (thou head)	1,632	1,398	1,236	324	316	375	233	312	---	---	
Hogs & pigs (10-States) 4/											
Inventory (thou head) 1/	42,420	41,100	39,670	41,820	41,100	38,210	37,845	39,335	39,870	38,235	
Breeding (thou head) 1/	5,348	5,258	5,050	5,377	5,258	4,948	4,840	4,840	5,155	5,230	
Market (thou head) 1/	37,072	35,842	34,620	36,443	35,842	33,262	33,005	34,495	34,715	34,005	
Farrowings (thou head)	9,020	8,831	8,208	2,265	1,863	2,161	2,034	2,150	1,957	5/	
2,305											
Pig crop (thou head)	67,680	67,648	63,714	17,255	14,254	16,878	15,853	16,878	151,566	---	

1/ Beginning of period. 2/ Bushels of corn equal in value to 100 pounds live-weight. 3/ Beginning January 1984 prices are for 14-17 lbs.; January 1986 prices are for 14-18 lbs. 4/ Quarters are Dec of preceding year-Feb. (I), Mar.-May (II), June-Aug. (III), and Sept.-Nov. (IV). 5/ Intentions. *Classes estimated. NA = not available.

Information contact: Ron Gustafson or Leland Southard (202) 786-1830.

Crops and Products

Table 17.—Supply and utilization^{1,2}

	Area			Yield	Production	Total supply	Feed and residual	Other domestic use	Exports	Total use	Ending stocks	Farm price
	Set aside 3/	Planted	Harvested									
	Mill. acres		Bu./acre									\$/bu
Wheat												
1981/82	0	88.3	80.6	34.5	2,785	3,777	135	712	1,771	2,618	1,159	3.69
1982/83	5.8	86.2	77.9	35.6	2,765	3,932	195	713	1,509	2,417	1,515	3.45
1983/84	30.0	76.4	61.4	39.4	2,420	3,939	369	742	1,429	2,540	1,399	3.51
1984/85*	18.6	79.2	65.9	38.8	2,595	4,003	405	749	1,424	2,578	1,425	3.39
1985/86*	18.8	75.6	64.7	37.5	2,425	3,865	273	771	915	1,960	1,905	3.08
1986/87*	20.5	72.0	60.7	34.4	2,087	4,007	350	784	1,025	2,159	1,848	2.30-2.40
Rice												
	Mill. acres		lb/acre					Mill. cwt (rough equiv.)				\$/cwt
1981/82	0	3.83	3.79	4,819	182.7	199.6	--	6/ 78.1	87.0	150.6	48.0	9.05
1982/83	0.42	3.30	3.26	4,710	153.6	203.4	--	6/ 62.9	68.9	131.8	71.5	7.91
1983/84	1.74	2.18	2.17	4,598	99.7	171.9	--	6/ 54.7	70.3	129.0	46.9	8.57
1984/85*	.79	2.83	2.80	4,954	138.8	187.3	--	6/ 60.5	62.1	122.6	64.7	8.04
1985/86*	1.24	2.51	2.49	5,414	134.9	201.8	--	6/ 65.8	58.7	124.5	77.3	6.53
1986/87*	1.28	2.40	2.38	5,648	134.4	213.8	--	6/ 67.0	80.0	147.0	66.9	3.45-4.25
Corn												
	Mill. acres		Bu./acre					Mill. bu				\$/bu
1981/82	0	84.1	74.8	108.8	9,119	9,812	4,169	796	2,010	6,975	2,537	2.47
1982/83	2.1	81.8	72.7	113.2	8,235	10,772	4,521	894	1,834	7,249	3,523	2.55
1983/84	33.2	60.2	51.5	81.1	4,175	7,700	3,818	875	1,901	6,694	1,006	3.21
1984/85*	3.8	60.5	71.9	106.7	7,674	8,684	4,079	1,091	1,865	7,036	1,648	2.63
1985/86*	5.4	83.4	75.2	118.0	8,877	10,536	4,095	1,160	1,241	6,496	4,040	2.23
1986/87*	13.0	76.7	68.2	119.3	8,253	12,285	4,500	1,180	1,375	7,055	5,240	1.35-1.65
Sorghum												
	Mill. acres		Bu./acre					Mill. bu				\$/bu
1981/82	0	18.9	13.7	64.0	876	1,006	417	10	260	687	319	2.25
1982/83	0.7	16.0	14.1	59.1	835	1,154	495	10	210	715	439	2.47
1983/84	5.7	11.8	10.0	48.7	488	927	385	10	245	640	287	2.74
1984/85*	.6	17.3	15.4	96.4	866	1,154	539	18	297	854	300	2.32
1985/86*	.8	18.3	16.8	66.8	1,120	1,420	562	29	178	868	551	1.93
1986/87*	2.5	15.3	13.9	67.7	942	1,493	590	30	225	805	688	1.30-1.50
Barley												
	Mill. acres		Bu./acre					Mill. bu				\$/bu
1981/82	0	9.6	9.0	52.4	474	621	198	175	100	473	148	2.48
1982/83	0.4	8.5	8.0	57.2	516	675	241	170	47	458	217	2.18
1983/84	1.1	10.4	9.7	52.3	509	733	282	170	92	544	189	2.47
1984/85*	.5	12.0	11.2	93.4	599	799	304	170	77	551	247	2.29
1985/86*	.7	13.2	11.6	81.0	581	847	333	167	22	522	325	1.98
1986/87*	1.8	13.1	12.0	50.8	510	941	300	175	150	625	316	1.45-1.65
Oats												
	Mill. acres		Bu./acre					Mill. bu				\$/bu
1981/82	0	13.6	9.4	54.2	510	689	453	77	7	537	152	1.88
1982/83	0.1	14.0	10.3	57.8	593	749	441	85	31	529	220	1.49
1983/84	.3	20.3	9.1	52.6	477	727	466	78	2	546	181	1.62
1984/85*	1	12.4	8.2	58.0	474	689	433	74	1	509	180	1.67
1985/86*	1	13.3	8.2	63.7	521	729	460	83	2	545	184	1.23
1986/87*	0.7	14.7	6.8	56.0	385	598	400	85	2	487	111	1.00-1.20
Soybeans												
	Mill. acres		Bu./acre					Mill. bu				\$/bu
1981/82	0	67.5	66.2	30.1	1,989	2,302	7/ 89	1,030	929	2,048	254	6.04
1982/83	0	70.9	69.4	31.5	2,180	2,444	7/ 86	1,108	905	2,089	345	5.69
1983/84	0	63.8	62.5	26.2	1,636	1,981	7/ 79	983	743	1,905	176	7.83
1984/85*	0	67.8	66.1	28.1	1,861	2,037	7/ 83	1,030	598	1,721	316	5.84
1985/86*	0	63.1	61.8	34.1	2,099	2,415	7/ 86	1,053	740	1,879	536	5.08
1986/87*	0	61.5	59.4	33.8	2,007	2,543	7/103	1,120	700	1,923	610	4.60-4.80
Soybean oil												
								Mill. lbs				\$/a/1b
1981/82	--	--	--	--	10,979	12,715	--	9,536	2,077	11,612	1,103	18.0
1982/83	--	--	--	--	12,041	13,144	--	9,858	2,025	11,883	1,261	20.6
1983/84	--	--	--	--	10,872	12,133	--	9,588	1,824	11,412	721	30.6
1984/85*	--	--	--	--	11,468	12,209	--	9,917	1,660	11,577	632	29.5
1985/86*	--	--	--	--	11,617	12,287	--	10,053	1,257	11,310	847	18.0
1986/87*	--	--	--	--	12,263	13,210	--	10,500	1,350	11,850	1,360	14.5-16.0
Soybean meal												
								Thou. tons				\$/ton
1981/82	--	--	--	--	24,634	24,797	--	17,714	6,908	24,622	175	183
1982/83	--	--	--	--	26,714	26,889	--	19,306	7,109	26,415	474	187
1983/84	--	--	--	--	22,756	23,230	--	17,615	5,360	22,975	255	188
1984/85*	--	--	--	--	24,529	24,784	--	19,480	4,917	24,397	387	125
1985/86*	--	--	--	--	24,951	25,338	--	19,090	6,036	25,126	212	155
1986/87*	--	--	--	--	26,558	26,770	--	20,000	6,500	26,500	270	140-150

See footnotes at end of table.

Table 17.— Supply and utilization, continued

	Area			Yield	Production	Total supply	Feed and residual	Other domestic use	Exports	Total use	Ending stocks	Farm price
	Set aside	Planted	Harvested									
	3/					4/						5/
		1000 acres	1000 acres	lb/acre								\$/lb
Cotton 10/												
1981/82	0	14.3	13.8	542	15.6	18.3	--	5.3	6.6	11.8	6.6	\$5.4
1982/83	1.8	11.3	9.7	590	12.0	18.6	--	5.5	5.2	10.7	7.9	\$9.5
1983/84	6.8	7.9	7.3	508	7.6	15.7	--	5.9	6.8	12.7	2.8	\$5.3
1984/85*	2.5	11.1	10.4	600	13.0	15.8	--	5.5	6.2	11.8	4.1	\$8.7
1985/86-	3.6	10.7	10.2	630	13.4	17.6	--	6.4	2.0	8.4	8.4	\$6.8
1986/87-	3.6	10.1	8.5	549	9.7	18.1	--	7.1	6.7	13.8	5.4	--

*April 9, 1987 Supply and Demand Estimates. 1/ Marketing year beginning June 1 for wheat, barley, and oats, August 1 for cotton and rice, September 1 for soybeans, corn, and sorghum, October 1 for soybean meal, and soybean oil. 2/ Conversion factors: Hectares (ha.) = 2.471 acres, 1 metric ton = 2204.622 pounds, 35.7437 bushels of wheat or soybeans, 39.3679 bushels of corn or sorghum, 45.9296 bushels of barley, 68.8944 bushels of oats, 22.046 cwt. of rice, and 4.59 480-pound bales of cotton. 3/ Includes diversion, FIK, and acreage reduction programs. 4/ Includes imports. 5/ Market average prices do not include an allowance for loans outstanding and Government purchases. 6/ Residual included in domestic use. 7/ Includes seed. 8/ Average of crude soybean oil, Decatur. 9/ Average of 44 percent, Decatur. 10/ Upland and extra long staple. Stock estimates based on Census Bureau data which results in an unaccounted difference between supply and use estimates and changes in ending stocks.

Information contact: National Economics Division, Crops Branch (202) 786-1840.

Table 18.—Food grains

	Marketing year 1/				1986				1987	
	1982/83	1983/84	1984/85	1985/86	Feb	Oct	Nov	Dec	Jan	Feb
Wholesale prices										
Wheat, No. 1 HRW.										
Kansas City (\$/bu) 2/	3.84	3.84	3.74	3.28	3.30	2.60	2.68	2.68	2.70	2.80
Wheat, DNS.										
Minneapolis (\$/bu) 2/	3.95	4.21	3.70	3.25	3.90	2.70	2.81	2.77	2.82	3.13
Rice, S.W. La. (\$/cwt) 3/	18.00	19.38	17.98	16.11	17.50	10.25	9.94	10.13	10.13	9.96
Wheat										
Exports (mil bu)	1,509	1,429	1,424	815	78	92	68	58	77	NA
Mill grind (mil bu)	656	694	676	707	60	70	66	65	60	NA
Wheat flour production (mil cwt)	292	308	301	317	27	31	29	29	27	NA
Rice										
Exports (mil cwt, rough equiv)	68.8	70.3	62.1	58.7	2.6	8.1	6.5	4.6	5.2	5.4
	Marketing year 1/			1985		1986			1987	
	1983/84	1984/85	1985/86	June-Sept	Oct-Dec	Jan-Mar	Apr-May	Jun-Aug	Sept-Nov	Dec-Feb
Wheat										
Stocks, beginning (mil bu)	1,515	1,399	1,425	1,425.2	2,971.1	2,526.1	2,130.0	1,805.0	3,154.6	2,671.5
Domestic use:										
Food (mil bu)	643	651	678	223.7	176.8	166.9	110.7	171.1	187.7	NA
Feed & seed (mil bu) 4/	469	502	371	334.7	24.9	4.9	1.8	379.7	35.2	NA
Exports (mil bu)	1,429	1,424	915	326.6	247.3	226.1	115.3	320.6	264.2	NA

1/ Beginning June 1 for wheat and August 1 for rice. 2/ Ordinary protein. 3/ Long-grain, milled basis. 4/ Feed use approximated by residual. NA = not available.

Information contacts: Allen Schienbein and Janet Lipezey (202) 786-1840.

Table 19.—Cotton

	Marketing year 1/				1986				1987	
	1982/83	1983/84	1984/85	1985/86	Feb	Oct	Nov	Dec	Jan	Feb
U.S. price, SLM.										
1-1/16 in. (cts/lb) 2/	63.1	73.1	60.5	60.0	59.8	44.0	45.7	54.2	57.2	54.8
Northern Europe prices:										
Index (cts/lb) 3/	76.7	87.6	69.2	48.9	54.5	51.2	52.8	59.2	65.7	65.9
U.S. #1-3/32" (cts/lb) 4/	78.0	87.1	73.9	64.8	70.1	52.4	54.3	62.1	65.3	64.8
U.S. mill consumption (thou bales)	5,512.8	5,927.0	5,544.5	6,398.9	522.5	660.4	554.4	555.5	620.8	582.8
Exports (thou bales)	5,206.8	6,786.0	6,201.3	1,969.2	192.9	341.8	571.3	543.7	612.5	NA
Stocks, beginning (thou bales)	6,632	7,937	2,775	4,102	13,121	10,049	12,053	13,207	13,248	12,716

1/ Beginning August 1. 2/ Average spot market. 3/ Liverpool Outlook "A" index: average of five lowest prices of 10 selected growths. 4/ Memphis territory growths.

Information contact: Bob Skinner (202) 786-1840.

Table 20.—Feed grains

	Marketing year 1/				1986				1987	
	1982/83	1983/84	1984/85	1985/86	Feb	Oct	Nov	Dec	Jan	Feb
Wholesale prices										
Corn, No. 2 yellow, Chicago (\$/bu)	2.98	3.46	2.79	2.35	2.49	1.51	1.68	1.66	1.57	1.50
Sorghum, No. 2 yellow, Kansas City (\$/cwt)	4.80	5.22	4.46	3.72	3.80	2.60	2.70	2.62	2.50	2.57
Barley, feed, Minneapolis (\$/bu)	1.76	2.48	2.09	1.53	--	1.50	1.63	1.23	--	--
Barley, malting, Minneapolis (\$/bu)	2.53	2.84	2.55	2.24	2.20	1.93	2.02	1.88	1.81	1.92
Exports										
Corn (mil bu)	1,834	1,902	1,865	1,241	121	125	115	111	104	NA
Feed grains (mil metric tons) 2/	53.0	56.5	56.6	36.6	3.4	4.1	3.6	3.6	3.4	NA

	Marketing year 1/				1985		1986			
	1982/83	1983/84	1984/85	1985/86	June-Aug	Sept-Nov	Dec-Feb	Mar-May	June-Aug	Sept-Nov
Corn										
Stocks, beginning (mil bu)	2,537	3,523	1,006	1,648	2,836	1,648	8,615	6,587	4,990	4,040
Domestic use:										
Feed (mil bu)	4,521	3,818	4,116	4,126	612	1,222	1,305	1,093	507	1,394
Food, seed, ind. (mil bu)	895	975	1,055	1,129	280	272	259	302	296	275
Exports (mil bu)	1,834	1,902	1,865	1,241	296	418	465	204	154	321
Total use (mil bu)	7,249	6,694	7,036	6,496	1,188	1,911	2,029	1,599	956	1,990

1/ September 1 for corn and sorghum; June 1 for oats and barley. 2/ Aggregated data for corn, sorghum, oats, and barley.

Information contacts: Dave Hull (202) 786-1840.

Table 21.—Fats and oils

	Marketing year 1/				1986				1987	
	1982/83	1983/84	1984/85	1985/86	Jan	Sept	Oct	Nov	Dec	Jan
Soybeans										
Wholesale price, No. 1 yellow, Chicago (\$/bu) 2/	6.11	7.78	5.88	5.20	5.36	4.74	4.74	4.96	4.88	4.90
Crushings (mil bu)	1,107.8	982.7	1,030.5	1,052.8	89.6	78.4	107.0	109.3	107.6	110.3
Exports (mil bu)	905.2	742.8	598.2	740.0	84.7	30.2	89.7	96.6	88.2	71.3
Stocks, beginning (mil bu)	254.5	344.6	175.7	316.0	119.8	28.5	38.3	108.1	127.4	117.2
Soybean oil										
Wholesale price, crude, Decatur (cts/lb)	20.62	30.55	29.52	18.0	20.63	13.94	14.63	14.88	14.94	15.55
Production (mil lb)	12,040.4	10,872.0	11,467.9	11,620.4	1,085.8	889.3	1,166.5	1,171.5	1,150.2	1,185.6
Domestic disp. (mil lb)	9,857.3	9,598.6	9,816.7	10,062.8	807.2	877.6	998.1	867.5	888.4	785.0
Exports (mil lb)	2,024.7	1,813.6	1,659.8	1,257.2	80.6	223.4	146.5	27.4	25.3	67.9
Stocks, beginning (mil lb)	1,102.5	1,260.8	720.5	632.5	969.4	1,152.2	946.6	963.6	1,268.8	1,506.5
Soybean meal										
Wholesale price, 44% protein, Decatur (\$/ton)	187.19	188.21	125.46	154.90	153.25	165.20	165.40	154.00	149.60	146.80
Production (thou ton)	26,713.6	22,756.2	24,529.3	24,957.8	2,343.8	1,878.7	2,521.3	2,562.8	2,527.3	2,540.7
Domestic disp. (thou ton)	19,306.0	17,615.2	19,481.7	19,122.3	1,739.5	1,644.6	2,005.8	1,575.4	1,788.7	1,944.7
Exports (thou ton)	7,108.7	5,359.7	4,816.5	6,007.0	590.3	312.9	511.5	818.4	877.7	592.8
Stocks, beginning (thou ton)	175.2	474.1	255.4	387.0	358.4	288.3	211.7	218.0	387.3	240.3
Margarine, wholesale price, Chicago, white (cts/lb)	41.1	46.3	55.4	42.1	43.99	38.00	38.69	38.88	38.55	39.25

1/ Beginning September 1 for soybeans; October 1 for soybean meal and oil; calendar year for margarine. 2/ Beginning April 1, 1982, prices based on 30-day delivery, using upper end of the range.

Information contacts: Roger Hoskin (202) 786-1840; Tom Bickerton (202) 786-1691.

Table 22.—Fruit

	Calendar years											
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986 F
Citrus												
Production (thou ton)	14,586	14,788	18,242	14,255	13,329	16,484	15,105	12,057	13,608	10,782	10,488	5/
12,036												
Per capita consumption (lbs) 1/	119.5	117.8	118.8	108.1	108.8	113.1	104.7	110.0	120.7	103.2	115.4	119.4
Non citrus												
Production (thou tons)	12,384	11,846	12,274	12,460	13,689	15,152	12,961	14,217	14,154	14,290	14,230	13,934
Per capita consumption (lbs) 1/	85.5	84.4	84.8	83.3	85.9	87.4	88.2	89.3	89.2	93.4	95.1	94.0
	1986											1987
	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb
Fob shipping point prices												
Apples (\$/carton) 2/	14.85	15.62	18.10	18.50	22.86	NA	17.03	13.70	13.63	14.00	10.67	14.00
Pears (\$/box) 3/	15.50	NA	24.18	25.70	NA	14.67	14.00	15.00	15.10	14.50	16.00	15.63
Oranges (\$/box) 4/	3.85	3.79	4.19	4.27	3.63	4.03	4.34	4.47	6.58	4.24	4.24	4.75
Grapefruit (\$/box) 4/	3.94	4.22	5.20	5.98	6.17	6.76	6.63	6.29	4.19	4.54	4.50	4.55
Stocks, ending												
Fresh apples (mil lbs)	1,039.3	812.6	267.2	118.8	25.4	7.9	2,349.5	4,142.7	3,532.2	2,891.7	2,307.2	1,720.2
Fresh pears (mil lbs)	71.6	35.5	4.8	.7	75.0	124.4	325.1	333.2	281.2	214.7	170.9	120.9
Frozen fruits (mil lbs)	544.6	496.9	461.4	558.1	719.6	741.1	740.7	855.6	777.5	720.9	632.3	556.2
Frozen orange juice (mil lbs)	911.5	1,031.6	1,047.5	1,056.9	920.3	855.3	715.4	877.6	524.8	621.2	877.8	1,015.5

1/ Per capita consumption of both fresh and processed fruit in fresh weight equivalent. Eighteen fruit items are not included in this year's new per capita consumption series. 2/ Red Delicious, Washington, extra fancy, carton tray pack, 80-113's. 3/ D'Anjou, Washington, standard box wrapped, U.S. No. 1, 80-135's. 4/ U.S. equivalent on-tree returns. 5/ As of April 1, 1987. NA = not available.

Information contact: Ben Huang (202) 786-1767.

Table 23.—Vegetables

	Calendar years												
	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986			
Production													
Total vegetables (1,000 cwt) 1/	402,936	382,165	413,925	381,370	379,123	431,515	403,320	457,392	453,769	445,436			
Fresh (1,000 cwt) 1/ 2/	176,541	182,563	190,859	190,228	194,694	207,924	197,919	217,132	217,932	213,724			
Processed (tons) 3/	11,319,790	8,880,100	11,153,300	9,557,100	8,221,460	11,179,590	10,270,050	12,013,020	11,791,860	11,585,630			
Mushrooms (1,000 lbs)	398,703	454,007	470,069	469,576	517,146	490,826	561,531	595,681	587,956	NA			
Potatoes (1,000 cwt)	355,334	366,314	342,447	302,857	338,591	355,131	333,911	362,612	407,109	352,274			
Sweetpotatoes (1,000 cwt)	11,885	13,115	13,370	10,953	12,799	14,833	12,083	12,986	14,853	12,754			
Dry edible beans (1,000 cwt)	16,555	18,935	20,552	26,729	32,751	25,563	15,520	21,070	22,175	22,888			
	1986										1987		
	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb
Shipments													
Fresh (1,000 cwt) 4/	16,643	17,454	19,210	32,927	26,825	27,818	17,579	15,174	19,275	15,967	15,766	20,607	18,066
Potatoes (1,000 cwt)	10,726	11,953	13,604	16,037	9,882	7,757	8,066	7,907	11,332	9,928	10,836	14,569	10,729
Sweetpotatoes (1,000 cwt)	313	413	227	250	177	160	86	246	428	706	389	278	259

1/ 1983 data are not comparable with 1984 and 1985. 2/ Estimate reinstated for asparagus with the 1984 crop, all other years also include broccoli, carrots, cauliflower, celery, sweet corn, lettuce, honeydews, onions, and tomatoes. 3/ Estimates reinstated for cucumbers with the 1984 crop, all other years also include snap beans, sweet corn, green peas, and tomatoes. 4/ Includes snap beans, broccoli, cabbage, carrots, cauliflower, celery, sweet corn, cucumbers, eggplant, lettuce, onions, bell peppers, squash, tomatoes, cantaloupes, honeydews, and watermelons. NA = not available.

Information contact: Shannon Hays (202) 786-1767.

Table 24.—Other commodities

	Annual					1986				1987
	1982	1983	1984	1985	1986 F	Jan-Mar	Apr-June	July-Sept	Oct-Dec	Jan-Mar
Sugar										
Production 1/	5,936	5,682	5,890	5,969	6,275	1,615	728	2,685	2,952	1,568
Deliveries 1/	8,153	8,812	8,454	8,035	7,810	1,834	1,813	2,069	1,970	1,900
Stocks, ending 1/	3,068	2,570	3,005	3,126	3,130	3,384	2,540	1,652	2,879	3,345
Coffee										
Composite green price N.Y. (cts/lb)	132.00	131.81	142.95	137.46	185.18	215.33	190.79	174.92	159.69	115.38
Imports, green bean equiv. (million lbs) 2/	2,352	2,259	2,411	2,550	2,586	810	653	635	498	690 F
	Annual				1985	1986				
	1984	1985	1986	Dec	July	Aug	Sept	Oct	Nov	Dec
Tobacco										
Prices at auctions 3/										
Flue-cured (dol/lb)	1.81	1.72	1.52	NQ	NQ	1.44	1.60	1.50	1.40	NQ
Burley (dol/lb)	1.88	1.59	1.57	1.80	NQ	NQ	NQ	NQ	1.58	1.57
Domestic consumption 4/										
Cigarettes (bil)	600.4	594.0	584.0	48.0	38.4	51.4	50.8	52.0	49.2	48.8
Large cigars (mil)	3,493	3,226	3,090	238.1	270.4	251.7	272.3	268.5	220.9	251.6

1/ 1,000 short tons, raw value. Quarterly data shown at end of each quarter. 2/ Green and processed coffee. 3/ Crop year July-June for flue-cured, October-September for burley. 4/ Taxable removals. F = forecast. NQ = no quote.

Information contacts: (sugar) Dave Harvey (202) 786-1769; (coffee) Fred Gray (202) 786-1769; (tobacco) Verner Grise (202) 786-1768.

Table 25.—World supply and utilization of major crops, livestock and products

	1980/81	1981/82	1982/83	1983/84	1984/85 E	1985/86 P	1986/87 F
Million units							
Wheat							
Area (hectare)	237.0	238.7	237.7	229.1	231.4	229.8	227.9
Production (metric ton)	443.0	449.5	477.5	489.5	511.6	499.0	529.2
Exports (metric ton) 1/	94.1	101.3	98.7	102.0	107.0	84.9	88.2
Consumption (metric ton) 2/	445.8	443.6	462.2	482.3	495.6	487.5	517.3
Ending stocks (metric ton) 3/	78.2	87.0	102.3	109.5	125.5	137.1	149.0
Coarse grains							
Area (hectare)	342.4	349.9	339.7	335.3	335.5	340.0	336.2
Production (metric ton)	732.9	766.0	784.4	687.4	814.1	844.6	835.2
Exports (metric ton) 1/	108.0	96.6	89.6	91.2	100.7	83.4	85.5
Consumption (metric ton) 2/	745.1	737.7	753.1	762.2	783.2	770.8	796.3
Ending stocks (metric ton) 3/	90.6	120.7	151.8	76.9	107.8	181.6	220.5
Rice, milled							
Area (hectare)	144.5	145.2	141.1	144.3	144.4	144.4	144.4
Production (metric ton)	271.0	280.6	285.7	308.0	319.2	320.1	317.9
Exports (metric ton) 4/	13.1	11.8	11.9	12.6	11.5	12.8	11.5
Consumption (metric ton) 2/	272.3	281.5	290.2	308.8	314.2	317.6	321.4
Ending stocks (metric ton) 3/	22.1	21.3	17.3	17.2	22.2	24.7	21.2
Total grains							
Area (hectare)	723.9	733.8	718.5	708.7	711.3	714.2	708.5
Production (metric ton)	1,446.9	1,496.1	1,547.6	1,484.9	1,644.9	1,663.7	1,682.3
Exports (metric ton) 1/	215.2	208.7	200.2	205.8	219.2	181.1	185.2
Consumption (metric ton) 2/	1,463.2	1,462.8	1,505.5	1,553.3	1,593.0	1,575.9	1,635.0
Ending stocks (metric ton) 3/	190.9	229.0	271.4	203.6	255.5	343.4	390.7
Oilseeds							
Crush (metric ton)	129.8	138.9	143.6	136.5	150.7	153.9	155.2
Production (metric ton)	154.9	169.4	178.2	165.6	190.9	195.8	196.5
Exports (metric ton)	31.3	35.8	35.2	33.0	32.9	34.1	34.7
Ending stocks (metric ton)	15.8	13.5	20.5	15.8	21.2	26.8	29.7
Meals							
Production (metric ton)	88.8	94.5	88.1	92.8	101.8	103.9	105.7
Exports (metric ton)	26.9	28.8	31.6	29.6	32.3	33.8	33.9
Oils							
Production (metric ton)	39.1	41.6	43.4	42.3	46.2	49.3	49.4
Exports (metric ton)	12.6	13.4	14.0	13.7	15.5	16.4	16.0
Cotton							
Area (hectare)	32.1	33.0	31.4	31.0	33.9	31.7	29.8
Production (bale)	65.0	71.2	68.0	67.7	88.1	78.9	69.5
Exports (bale)	19.7	20.2	19.4	19.2	20.5	20.3	23.4
Consumption (bale)	65.8	66.0	68.1	68.5	70.4	76.8	80.7
Ending stocks (bale)	21.3	21.1	25.9	25.0	42.7	45.9	34.2
	1981	1982	1983	1984	1985	1986 F	1987 F
Red meat							
Production (mil metric tons)	93.6	93.9	96.4	98.1	101.8	102.2	102.5
Consumption (mil metric tons)	92.0	92.2	94.7	96.1	99.7	100.9	101.0
Exports (mil metric tons) 1/	5.7	5.8	5.8	5.9	6.3	6.1	6.4
Poultry							
Production (mil metric tons)	22.5	23.1	23.5	24.2	25.2	26.1	27.4
Consumption (mil metric tons)	22.1	22.7	23.5	24.0	24.8	25.6	26.9
Exports (mil metric tons) 1/	1.5	1.4	1.3	1.2	1.2	1.2	1.3
Dairy							
Milk production	389.7	396.9	412.5	413.0	417.9	423.2	423.2

E = estimated. P = projected. F = forecast. 1/ Excludes intra-EC trade. 2/ Where stocks data not available (excluding USSR), consumption includes stock changes. 3/ Stocks data are based on differing marketing years and do not represent levels at a given date. Data not available for all countries; includes estimated change in USSR grain stocks but not absolute level. 4/ Calendar year data. 1981 data correspond with 1980/81, etc.

Information contact: Frederic Suris (202) 786-1693.

Table 26.—Prices of principal U.S. agricultural trade products

	Annual			1986					1987	
	1984	1985	1986	Feb	Sept	Oct	Nov	Dec	Jan	Feb
Export commodities										
Wheat, f.o.b. vessel, Gulf ports (\$/bu)	4.17	3.73	3.19	3.57	2.83	2.86	2.90	2.97	3.00	3.09
Corn, f.o.b. vessel, Gulf ports (\$/bu)	3.50	2.89	2.27	2.67	1.71	1.69	1.89	1.89	1.77	1.74
Grain sorghum, f.o.b. vessel, Gulf ports (\$/bu)	3.00	2.64	2.16	2.46	1.73	1.81	1.89	1.84	1.75	1.75
Soybeans, f.o.b. vessel, Gulf ports (\$/bu)	7.38	5.83	5.45	5.63	5.37	5.13	5.24	5.14	5.13	5.08
Soybean oil, Decatur (cts/lb)	30.78	27.03	16.36	18.34	13.84	14.61	14.66	14.68	15.45	15.21
Soybean meal, Decatur (\$/ton)	166.80	127.15	157.62	153.28	166.19	152.85	154.05	149.54	147.65	153.24
Cotton, 8 market avg. spot (cts/lb)	68.37	58.55	53.47	59.81	33.56	43.91	45.75	54.15	57.17	54.75
Tobacco, avg. price at auction (cts/lb)	170.64	172.05	154.26	162.27	151.92	145.48	146.40	146.40	144.90	145.82
Rice, f.o.b. mill, Houston (\$/cwt)	19.47	18.49	14.60	17.50	13.00	13.00	13.00	13.00	11.13	10.50
Inedible tallow, Chicago (cts/lb)	17.47	14.33	9.03	11.81	8.10	8.44	8.47	9.40	10.69	11.00
Import commodities										
Coffee, N.Y. spot (\$/lb)	1.46	1.42	2.01	2.26	2.03	1.87	1.67	1.46	1.27	1.20
Rubber, N.Y. spot (cts/lb)	49.70	41.91	42.87	42.76	45.29	46.87	44.78	44.67	45.93	46.51
Cocoa beans, N.Y. (\$/lb)	1.06	.99	.88	.86	.96	.91	.87	.86	.86	.85

Information contact: Mary Teymourian (202) 786-1692.

Table 27.—Indexes of nominal and real trade-weighted dollar exchange rates

	1986									1987		
	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar
March 1973=100												
Total U.S. trade 1/ Nominal	116	116	113	114	110	108	107	107	108	101*	99*	99*
April 1971=100												
Agricultural trade												
Nominal 2/	4.500	4.511	4.498	4.567	4.661	4.680	4.733	4.784	4.903	5.238	6.102	6.853
Real 3/	85	84	85	85	87	87	89*	90*	89*	86*	85*	85*
Soybeans												
Nominal 2/	105	103	103	161	250	266	280	294	305	314	327	343
Real 3/	76	74	75	75	75	75	75*	76*	75*	71*	70*	70*
Wheat												
Nominal 2/	26.457	26.533	26.449	26.499	26.501	26.514	26.733	27.020	27.616	29.557	34.601	39.697
Real 3/	101	100	101	100	102	102	109*	110*	108*	107*	108*	112*
Corn												
Nominal 2/	4.086	4.095	4.083	4.172	4.297	4.320	4.369	4.430	4.534	4.842	5.631	6.407
Real 3/	78	77	77	78	80	80	80*	80*	80*	76*	76*	76*
Cotton												
Nominal 2/	227	226	233	231	230	233	236	237	237	234	233	233
Real 3/	93	92	92	91	90	91	92*	92*	92*	90*	90*	89*

1/ Federal Reserve Board index of trade-weighted exchange value of the U.S. dollar against 10 other major industrial country currencies, plus Switzerland. These currencies dominate the financing of U.S. total trade. 2/ Nominal values are percentage changes in currency units per dollar, weighted by proportion of agricultural exports from the United States. An increase indicates that the dollar has appreciated. 3/ The real index deflates the nominal series by consumer price changes of the countries involved, resulting in divergence between nominal and real indexes when high-inflation countries figure significantly. The nominal Federal Reserve index shows little divergence between nominal and real indexes because of similar inflation rates among the countries included.

*Preliminary.

Information contact: Edward Wilson (202) 786-1688.

Table 28.—Trade balance

	Fiscal years*									Jan
	1979	1980	1981	1982	1983	1984	1985	1986	1987 F	1987
\$ million										
Exports										
Agricultural	31,979	40,481	43,780	39,085	34,769	38,027	31,201	26,325	26,000	2,236
Nonagricultural	135,838	169,846	185,423	176,310	189,373	170,014	179,236	176,613	NA	13,590
Total 1/	167,818	210,327	229,203	215,405	194,142	208,041	210,437	202,938	NA	15,826
Imports										
Agricultural	16,185	17,276	17,218	15,481	16,271	18,916	19,740	20,875	20,000	1,605
Nonagricultural	177,424	223,590	237,469	233,353	230,629	287,736	313,722	342,855	NA	27,899
Total 2/	193,610	240,866	254,687	248,834	246,900	316,652	333,462	363,730	NA	29,504
Trade balance										
Agricultural	15,793	23,205	26,562	23,614	18,498	19,111	11,461	5,450	6,000	631
Nonagricultural	-41,885	-83,744	-82,046	-87,043	-71,256	-127,722	-134,486	-166,242	NA	-14,309
Total	-25,782	-30,539	-25,484	-33,429	-52,758	-108,611	-123,025	-160,792	NA	-13,678

*Fiscal years begin October 1 and end September 30. Fiscal year 1986 began Oct. 1, 1985 and ended Sept. 30, 1986.

1/ Domestic exports including Department of Defense shipments (F.A.S. value). 2/ Imports for consumption (customs value). NA = not available. F = forecast.

Information contact: Steve MacDonald (202) 786-1621.

Table 29.—U.S. agricultural exports and imports

	Fiscal years*					Jan	Fiscal years*					Jan
	1984	1985	1986	1987 F	1987	1984	1985	1986	1987 F	1987		
	Thousand units						\$ million					
Exports												
Animals, live (no) 1/	754	996	570	--	17	276	255	344	--	22		
Meats & preps., excl. poultry (mt)	422	427	451	2/ 400	50	929	906	1,012	--	110		
Dairy products (mt)	418	423	481	--	23	393	414	430	400	24		
Poultry meats (mt)	225	234	265	300	30	280	257	282	--	34		
Fats, oils, & greases (mt)	1,395	1,217	1,355	3/ 1,300	95	703	608	477	--	33		
Hides & skins incl. furskins	--	--	--	--	--	1,318	1,325	1,456	--	142		
Cattle hides, whole (no) 1/	24,283	25,456	25,973	--	1,939	1,010	1,019	1,150	--	93		
Mink pelts (no) 1/	2,551	2,237	2,697	--	229	67	60	65	--	7		
Grains & feeds (mt)	108,194	93,903	74,437	--	6,061	17,304	13,285	9,476	4/ 8,200	631		
Wheat (mt)	41,689	28,523	25,490	26,500	1,760	6,497	4,264	3,259	5/ 3,000	181		
Wheat flour (mt)	1,071	718	1,137	1,300	146	234	164	204	--	20		
Rice (mt)	2,293	1,972	2,382	2,600	167	897	677	648	500	41		
Feed grains, incl. products (mt)	55,546	55,362	36,283	40,400	3,066	8,217	6,884	3,819	3,000	241		
Feeds & fodders (mt)	7,021	6,533	8,381	6/ 8,500	882	1,216	1,004	1,289	--	132		
Other grain products (mt)	564	795	754	--	52	243	293	257	--	21		
Fruits, nuts, and preps. (mt)	1,931	1,907	2,003	--	163	1,594	1,687	1,766	--	145		
Fruit juices incl. froz. (hl) 1/	5,598	4,641	3,652	--	304	223	200	148	--	13		
Vegetables & preps. (mt)	1,527	1,420	1,467	--	137	999	946	1,000	--	95		
Tobacco, unmanufactured (mt)	227	257	224	200	29	1,433	1,588	1,318	1,400	163		
Cotton, excl. linters (mt)	1,481	1,277	482	1,400	133	2,395	1,945	678	1,700	130		
Seeds (mt)	252	289	269	--	45	326	352	366	400	55		
Sugar, cane or beet (mt)	285	355	375	--	76	74	65	75	--	11		
Oilseeds & products (mt)	26,961	23,803	27,557	--	2,569	8,602	6,185	6,266	7/ 6,000	528		
Oilseeds (mt)	20,466	17,886	20,684	8/ 21,100	1,963	6,254	4,324	4,394	--	386		
Soybeans (mt)	19,265	16,621	20,139	20,700	1,940	5,734	3,876	4,174	4,000	374		
Protein meal (mt)	5,060	4,606	5,588	5,500	548	1,217	853	1,127	1,000	110		
Vegetable oils (mt)	1,435	1,311	1,284	--	58	1,131	1,018	746	--	32		
Essential oils (mt)	11	12	7	--	1	96	105	105	--	10		
Other	465	443	568	--	43	1,082	1,069	1,126	--	90		
Total	143,794	125,967	109,841	116,500	9,455	38,027	31,201	26,325	26,000	2,236		
Imports												
Animals, live (no) 1/	1,907	2,120	1,885	--	220	596	569	637	700	51		
Meats & preps., excl. poultry (mt)	905	1,123	1,139	1,127	97	1,831	2,214	2,248	2,400	206		
Beef & veal (mt)	550	674	693	712	56	1,165	1,295	1,252	1,500	109		
Pork (mt)	328	416	406	415	38	703	847	900	900	90		
Dairy products (mt)	382	418	400	410	26	757	763	786	800	57		
Poultry and products 1/	--	--	--	--	--	122	93	101	--	8		
Fats, oils, & greases (mt)	18	21	22	--	2	13	18	17	--	2		
Hides & skins, incl. furskins 1/	--	--	--	--	--	216	240	200	--	20		
Wool, unmanufactured (mt)	59	43	53	--	5	183	145	160	--	15		
Grains & feeds (mt)	1,805	2,070	2,311	2,580	254	534	604	668	700	59		
Fruits, nuts, & preps., excl. juices (mt)	4,036	4,483	4,637	4,830	367	1,634	1,891	1,976	2,000	153		
Bananas & plantains (mt)	2,727	3,022	3,042	3,100	246	666	752	740	700	64		
Fruit juices (hl) 1/	27,247	35,112	31,539	28,000	3,570	671	995	698	600	73		
Vegetables & preps. (mt)	2,093	2,140	2,199	2,260	229	1,314	1,347	1,560	1,500	127		
Tobacco, unmanufactured (mt)	190	191	208	220	14	563	556	605	700	40		
Cotton, unmanufactured (mt)	32	31	41	--	3	17	17	14	--	1		
Seeds (mt)	82	92	89	88	13	97	91	111	100	15		
Nursery stock & cut flowers 1/	--	--	--	--	--	292	318	353	--	10		
Sugar, cane or beet (mt)	2,829	2,338	1,905	1,900	168	1,144	812	654	--	51		
Oilseeds & products (mt)	1,137	1,271	1,508	1,789	133	799	784	639	600	46		
Oilseeds (mt)	223	253	197	--	7	95	98	69	--	3		
Protein meal (mt)	118	159	138	--	16	21	17	15	--	2		
Vegetable oils (mt)	797	859	1,173	--	110	683	670	555	--	40		
Beverages excl. fruit juices (hl) 1/	14,120	15,494	15,488	--	948	1,547	1,622	1,848	--	112		
Coffee, tea, cocoa, spices (mt)	1,776	1,868	1,940	1,868	152	4,777	4,983	6,099	5,400	428		
Coffee, incl. products (mt)	1,128	1,128	1,223	1,160	82	3,300	3,244	4,400	3,800	274		
Cocoa beans & products (mt)	451	639	507	525	52	1,058	1,285	1,189	1,200	112		
Rubber & allied gums (mt)	809	799	801	800	54	854	680	615	600	46		
Other	--	--	--	--	--	844	800	885	--	68		
Total	--	--	--	--	--	18,916	19,740	20,875	20,000	1,605		

*Fiscal years begin October 1 and end September 30. Fiscal year 1986 began Oct. 1, 1985 and ended Sept. 30, 1986. -- not available. 1/ Not included in total volume. 2/ Forecasts for footnoted items 3/-8/ are based on slightly different groups of commodities. Fiscal 1986 exports of categories used in the 1987 forecasts were: 2/ 413 thousand mt. 3/ 1,306 thousand mt. 4/ 8,648 million. 5/ 3,489 million. 1.a. includes flour. 6/ 8,218 thousand mt. 7/ 6,439 million. 8/ 20,481 thousand mt. F = forecast.

Information contact: Steve MacDonald (202) 786-1621.

Table 30. — U.S. agricultural exports by regions

Region & country	Fiscal years*				Jan	Change from year* earlier				Jan
	1984	1985	1986	1987 F	1987	1984	1985	1986	1987 F	1987
	\$ million					Percent				
Western Europe	9,265	7,183	6,857	6,700	717	-9	-22	-5	-3	-11
European Community (EC-12)	8,650	6,668	6,442	6,300	681	9	-23	-3	-2	-11
Belgium-Luxembourg	836	470	361	--	49	3	-44	-23	--	-3
France	510	396	431	--	44	-1	-22	9	--	0
Germany, Fed. Rep.	1,260	900	1,001	--	127	-13	-29	11	--	10
Italy	771	677	693	--	96	-4	-12	2	--	2
Netherlands	2,227	1,926	2,042	--	192	-21	-14	6	--	-5
United Kingdom	790	628	628	--	52	-4	-20	0	--	-19
Portugal	702	502	308	--	20	10	-28	-39	--	-37
Spain, incl. Canary Islands	1,232	832	723	--	73	3	-32	-13	--	-46
Other Western Europe	615	515	415	400	36	-10	-16	-19	0	-7
Switzerland	311	232	128	--	13	-12	-26	-45	--	21
Eastern Europe	741	532	447	400	8	-10	-28	-16	0	-86
German Dem. Rep.	132	81	52	--	0	7	-39	-36	--	-94
Poland	197	126	42	--	0	-15	-36	-66	--	-81
Yugoslavia	180	137	134	--	2	-28	-24	-2	--	-79
Romania	155	88	112	--	4	35	-43	27	--	-67
USSR	2,512	2,525	1,105	600	0	156	1	-56	-45	-100
Asia	15,208	11,933	10,498	10,700	912	12	-22	-12	2	-4
West Asia (Mideast)	1,865	1,452	1,243	1,300	97	26	-22	-14	8	-27
Turkey	222	129	111	--	4	693	-42	-13	--	-82
Iraq	423	371	321	--	22	31	-12	-13	--	-46
Israel	351	300	255	--	26	20	-15	-15	--	-32
Saudi Arabia	497	381	335	--	20	11	-23	-12	--	-1
South Asia	867	599	517	400	16	-26	-31	-14	-2	-62
Bangladesh	157	205	94	--	3	3	31	-54	--	-16
India	376	129	90	--	6	-51	-66	-30	--	3
Pakistan	285	228	285	--	1	33	-20	25	--	-97
China	692	239	88	100	35	27	-65	-63	0	287
Japan	6,935	5,663	5,139	5,100	474	18	-18	-9	0	-1
Southeast Asia	1,218	842	725	800	47	1	-31	-14	14	-6
Indonesia	438	204	172	--	9	7	-53	-16	--	-26
Philippines	300	285	270	--	18	-21	-5	-5	--	45
Other East Asia	3,631	3,138	2,787	3,000	243	10	-14	-11	7	2
Taiwan	1,409	1,342	1,108	--	89	14	-5	-17	--	-2
Korea, Rep.	1,816	1,400	1,277	--	122	6	-23	-9	--	9
Hong Kong	407	396	399	--	32	18	-3	1	--	-6
Africa	2,868	2,527	2,135	2,000	155	26	-12	-16	-5	-12
North Africa	1,542	1,207	1,402	1,400	136	6	-22	16	0	7
Morocco	341	156	159	--	15	52	-54	2	--	-61
Algeria	162	220	330	--	18	-20	36	50	--	-30
Egypt	882	766	875	--	100	23	-13	14	--	57
Sub-Saharan	1,327	1,320	733	600	18	62	-1	-44	-14	-61
Nigeria	345	367	158	--	3	4	6	-57	--	-65
Rep. S. Africa	525	189	70	--	2	304	-64	-63	--	-47
Latin America & Caribbean	5,279	4,570	3,599	3,900	268	9	-13	-21	8	-4
Brazil	438	557	444	--	35	10	27	-20	--	-36
Caribbean Islands	827	771	152	700	77	7	-7	-2	0	40
Central America	396	361	334	400	19	11	-9	-7	33	17
Colombia	220	238	137	--	4	-14	8	-42	--	-61
Mexico	1,866	1,566	1,115	1,400	79	11	-20	-29	27	-29
Peru	227	106	108	--	9	-12	-53	2	--	29
Venezuela	778	721	493	--	26	26	-7	-32	--	84
Canada	1,936	1,727	1,466	1,600	154	4	-11	-15	7	5
Oceania	216	204	216	200	23	-4	-6	6	0	30
Total	38,027	31,201	26,325	26,000	2,236	9	-18	-16	1	-12
Developed Countries	19,180	15,225	13,963	13,600	1,394	4	-21	-8	-3	-6
Less Developed Countries	14,902	12,680	10,721	11,300	798	7	-15	-15	6	-1
Centrally Planned Countries	3,945	3,296	1,640	1,100	43	67	-16	-50	-31	-75

*Fiscal years begin October 1 and end September 30. Fiscal year 1986 began Oct. 1, 1985 and ended Sept. 30, 1986. F = forecast.
 -- not available.

Note: Adjusted for transshipments through Canada.

Information contact: Steve MacDonald (202) 786-1621.

Farm Income

Table 31.—Farm income statistics

	Calendar years									
	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986 P 1987 F
	\$ billion									
1. Farm receipts	97.5	114.3	133.8	142.0	144.1	147.1	140.9	146.4	148.5	139 133 to 135
Crops (incl. net CCC loans)	48.6	53.2	62.3	71.7	72.5	72.4	67.0	68.2	72.7	63 57 to 59
Livestock	47.6	59.2	69.2	68.0	69.2	70.2	69.5	72.9	69.4	71 70 to 72
Farm related 1/	1.2	1.9	2.2	2.3	2.5	4.5	4.4	4.3	6.4	5 4 to 6
2. Direct Government payments	1.8	3.0	1.4	1.3	1.9	3.5	9.3	8.4	7.7	12 15 to 17
Cash payments	1.8	3.0	1.4	1.3	1.9	3.5	4.1	4.0	7.6	8 8 to 10
Value of PLK commodities	0.0	0.0	0.0	0.0	0.0	0.0	5.2	4.5	0.1	4 6 to 8
3. Total gross farm income (4+5+6)	108.8	128.4	150.7	149.3	166.3	163.4	152.4	174.4	166.6	158 155 to 157
4. Gross cash income (1+2) 2/	99.3	117.3	135.1	143.3	146.0	150.6	150.2	154.9	156.2	150 149 to 151
5. Nonmoney income 3/	8.4	9.3	10.6	12.3	12.8	14.1	13.2	13.3	11.5	10 8 to 10
6. Value of inventory change	1.1	1.9	5.0	-6.3	6.5	-1.3	-10.9	6.3	-1.1	-3 -4 to -2
7. Cash expenses 4/	71.4	84.2	101.7	109.1	113.2	113.8	113.0	115.6	112.1	106 102 to 104
8. Total expenses	88.9	103.2	123.3	133.1	139.4	140.7	139.5	141.7	136.1	129 123 to 125
9. Net cash income (4-7)	27.8	33.1	33.4	34.2	32.8	36.8	37.1	38.3	44.0	44 46 to 48
10. Net farm income (3-8)	19.9	25.2	27.4	16.1	26.9	22.7	13.0	32.7	30.5	29 31 to 33
Deflated (1982\$)	29.5	34.9	34.9	18.8	28.6	22.7	12.8	30.3	27.3	26 26 to 28
11. Off-farm income	26.1	29.7	33.8	34.7	35.8	36.4	37.0	37.9	40.8	43 43 to 45
12. Loan charges 5/:										
Real estate	7.6	7.6	13.0	9.3	9.4	4.0	2.5	-0.8	-5.6	-5 -2 to -4
Nonreal estate	6.8	8.3	10.8	5.9	6.2	3.4	1.0	-0.8	-9.2	-6 -2 to -4
13. Rental income plus monetary change	3.5	4.1	6.3	6.1	6.4	6.4	5.7	7.8	8.0	7 6 to 8
14. Capital expenditures 5/	15.0	17.8	19.9	18.0	16.8	13.7	13.0	12.5	10.1	8 6 to 8
15. Net cash flow (9+12+13+14-15)	30.8	35.1	43.7	37.5	37.9	37.0	33.3	33.0	27.1	32 40 to 42

P = preliminary F = midpoint of forecast range. 1/ Income from machine hire, custom work, sales of forest products, and other misc. cash sources. 2/ Numbers in parentheses indicate the combination of items required to calculate a given item. 3/ Value of home consumption of self-produced food and imputed gross rental value of farm dwellings. 4/ Excludes capital consumption, perquisites to hired labor, and farm household expenses. 5/ Excludes farm households. Totals may not add due to rounding.

Information contact: Richard Kofi (202) 786-1808.

Table 32.—Balance sheet of the U.S. farming sector

	Calendar years									
	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985 1986 P
	\$ billion									
Assets										
Real estate *	453.5	507.7	600.7	704.2	779.2	780.2	745.6	736.1	638.6	559.6 504
Non-real estate	136.8	149.0	183.0	213.8	224.0	225.0	232.2	220.4	216.5	211.9 198
Livestock & poultry	29.0	31.9	51.3	61.4	60.6	53.5	53.0	49.7	49.6	45.9 45
Machinery & motor vehicles	63.9	69.9	78.2	90.8	96.8	103.0	103.7	100.9	95.0	92.2 89
Crops stored	22.1	24.8	28.0	33.5	36.5	36.1	40.6	33.2	33.7	37.1 30
Financial assets	21.9	22.4	25.5	28.2	30.1	32.4	34.9	36.5	38.1	36.7 35
Total farm assets	590.4	656.7	783.7	918.1	1,003.2	1,005.2	977.8	956.5	856.1	771.4 702
Liabilities										
Real estate	50.3	58.0	65.6	78.5	87.8	97.2	101.2	103.7	102.9	97.3 89
Non-real estate	46.6	52.4	66.4	76.7	82.5	91.6	102.4	98.7	95.8	94.8 79
CCC loans	1.0	4.5	5.7	5.1	5.0	8.0	15.4	10.8	8.6	16.9 19
Other non-real estate	45.6	52.4	60.7	71.6	77.5	83.6	87.0	87.9	87.1	77.9 68
Total farm liabilities	97.0	114.9	131.9	155.2	170.4	188.8	203.6	202.4	198.7	192.1 176
Total farm equity	493.5	541.8	651.8	762.8	832.9	816.4	774.2	754.0	657.3	579.3 526
	Percent									
Selected ratios										
Debt-to-assets	16.4	17.5	16.8	16.8	17.0	18.8	20.8	21.2	23.2	24.9 25.1
Debt-to-equity	18.6	20.0	19.3	19.6	19.7	23.1	26.3	26.8	30.2	33.2 33.6
Debt-to-net cash income	323.2	412.3	398.2	464.4	497.7	576.1	553.0	545.5	505.8	433.2 400.8

* Excludes farm household. P = preliminary.

Information contact: Richard Kofi (202) 786-1808.

Table 33.—Cash receipts from farm marketings, by States

Region State	Livestock & Products				Crops 1/				Total 1/			
	1985	1986	Dec 1986	Jan 1987	1985	1986	Dec 1986	Jan 1987	1985	1986	Dec 1986	Jan 1987
	\$ million 2/											
North Atlantic												
Maine	244	247	20	21	138	134	13	15	383	381	33	36
New Hampshire	70	70	6	5	36	38	4	3	107	108	9	8
Vermont	352	362	31	33	34	36	5	2	386	388	36	34
Massachusetts	126	125	11	10	262	291	32	16	387	416	42	27
Rhode Island	14	14	1	1	62	63	9	3	76	77	10	4
Connecticut	204	204	19	17	151	162	10	29	355	366	30	46
New York	1,845	1,839	156	166	720	705	79	47	2,565	2,544	235	213
New Jersey	144	145	12	12	456	434	26	18	600	580	38	30
Pennsylvania	2,184	2,179	179	192	1,015	920	90	95	3,198	3,099	269	287
North Central												
Ohio	1,511	1,510	127	115	2,600	1,984	240	173	4,111	3,504	367	288
Indiana	1,728	1,730	159	135	3,064	2,170	281	152	4,792	3,900	440	286
Illinois	2,063	2,065	183	174	5,814	4,595	638	709	7,977	6,660	822	883
Michigan	1,231	1,232	109	99	1,698	1,416	204	133	2,929	2,648	313	232
Wisconsin	4,100	4,110	346	353	1,024	902	131	132	5,124	5,012	477	485
Minnesota	3,370	3,378	276	270	3,220	2,555	436	364	6,591	5,934	712	634
Iowa	4,811	4,878	418	403	4,581	4,023	887	814	9,393	8,901	1,302	1,217
Missouri	1,824	1,827	172	155	1,768	1,545	263	230	3,682	3,472	435	385
North Dakota	686	671	64	75	2,001	1,469	127	144	2,687	2,140	191	219
South Dakota	1,900	1,884	148	181	1,157	877	102	100	3,057	2,771	249	281
Nebraska	4,113	4,113	376	298	3,227	2,557	503	488	7,340	6,670	879	786
Kansas	3,264	3,262	278	288	2,555	1,847	241	276	5,819	5,108	518	564
Southern												
Delaware	352	352	25	35	134	117	8	4	487	469	32	39
Maryland	772	777	60	71	458	369	25	18	1,230	1,145	85	89
Virginia	1,062	1,063	72	82	628	489	42	28	1,691	1,551	114	110
West Virginia	182	182	18	14	83	60	7	7	245	252	22	21
North Carolina	1,947	2,016	173	162	1,981	1,560	151	56	3,928	3,576	324	219
South Carolina	415	414	31	36	627	429	49	24	1,042	843	80	60
Georgia	1,727	1,725	133	150	1,564	1,354	90	55	3,281	3,079	223	205
Florida	1,018	1,010	65	91	3,597	3,780	324	255	4,613	4,790	388	345
Kentucky	1,352	1,281	78	90	1,583	1,063	343	138	2,935	2,344	421	228
Tennessee	1,080	1,110	75	88	1,083	857	160	57	2,173	1,967	234	146
Alabama	1,301	1,303	81	106	781	580	51	40	2,082	1,863	132	146
Mississippi	1,010	1,018	75	86	1,234	675	133	74	2,244	1,694	208	160
Arkansas	1,825	1,866	121	137	1,611	866	97	72	3,437	2,731	218	209
Louisiana	481	522	29	38	1,013	838	184	117	1,505	1,360	213	155
Oklahoma	1,726	1,744	132	132	956	638	59	37	2,681	2,381	191	169
Texas	5,441	5,386	377	325	3,927	3,027	166	290	9,367	8,413	543	615
Western												
Montana	802	803	82	98	422	417	46	58	1,224	1,220	128	157
Idaho	862	862	63	84	1,220	1,020	128	89	2,082	1,882	191	173
Wyoming	479	477	32	41	123	112	18	8	601	589	50	50
Colorado	2,019	2,017	185	143	1,098	893	138	77	3,117	2,910	322	220
New Mexico	718	718	40	73	374	310	31	18	1,092	1,028	71	90
Arizona	700	714	25	45	862	838	119	137	1,562	1,552	143	182
Utah	413	415	33	30	142	133	11	14	555	549	45	44
Nevada	144	144	10	12	81	73	8	9	225	217	18	21
Washington	932	926	78	74	1,890	1,769	146	132	2,823	2,695	224	207
Oregon	622	622	65	51	1,118	1,112	88	74	1,740	1,734	153	125
California	4,161	4,170	362	326	10,026	10,057	865	623	14,187	14,227	1,227	948
Alaska	8	8	1	1	19	21	2	1	27	29	3	2
Hawaii	83	82	7	7	462	497	42	42	545	579	49	48
United States	69,535	69,682	5,611	5,635	74,762	62,664	7,852	6,496	144,297	132,346	13,462	12,131

1/ Sales of farm products include receipts from commodities placed under CCC loans minus value of redemptions during the period.

2/ Estimates as of the end of current month. Rounded data may not add.

Information contact: Roger Strickland (202) 786-1804.

Table 34.—Cash receipts from farming

	Annual						1986					1987
	1981	1982	1983	1984	1985	1986	Jan	Sept	Oct	Nov	Dec	Jan
	\$ million											
Farm marketings and CCC loans *	141,616	142,344	137,802	142,507	144,297	132,346	12,483	10,982	14,447	15,392	13,462	12,131
Livestock and products	69,151	70,249	69,453	73,042	69,535	69,682	5,434	5,954	6,830	6,743	5,611	5,635
Meat animals	39,748	40,917	38,893	40,832	38,185	38,259	2,867	3,309	4,090	3,941	3,083	2,998
Dairy products	18,095	18,234	18,757	17,944	18,135	18,135	1,531	1,458	1,516	1,483	1,544	1,588
Poultry and eggs	9,949	9,838	10,003	12,305	11,285	11,427	899	1,024	1,107	1,067	865	901
Other	1,358	1,560	1,800	1,960	1,930	1,861	137	163	116	252	118	137
Crops	72,465	72,095	68,349	69,465	74,762	62,664	8,049	5,028	7,617	8,649	7,852	6,496
Food grains	11,619	11,412	9,713	9,576	9,080	5,365	639	665	725	342	269	378
Feed crops	17,770	17,361	16,703	15,829	22,480	17,190	3,256	734	1,701	2,823	3,014	2,569
Cotton (lint and seed)	4,055	4,454	3,705	3,270	4,046	2,713	845	-128	482	779	555	481
Tobacco	3,250	3,342	2,768	2,841	2,722	1,901	179	404	270	182	417	167
Oil-bearing crops	13,853	13,828	13,546	13,894	12,620	10,321	1,533	893	1,922	1,777	1,254	1,378
Vegetables and melons	8,772	8,113	8,525	9,223	8,570	8,806	638	887	868	458	449	727
Fruits and tree nuts	6,603	6,821	6,059	6,770	6,787	7,416	388	813	877	1,004	777	208
Other	6,543	6,964	7,330	8,062	8,457	8,952	571	761	772	1,282	1,017	587
Government payments	1,932	3,492	8,295	8,430	7,704	11,398	69	939	792	418	1,890	479
Total	143,548	145,836	147,097	150,937	152,001	143,744	13,552	11,921	15,239	15,810	15,352	12,610

* Receipts from loans represent value of commodities placed under CCC loans minus value of redemptions during the month.

Information contact: Roger Strickland (202) 786-1804.

Table 35.—Farm production expenses

	Calendar years									
	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986 P
	\$ million 2/									
Feed	13,967	16,036	19,314	20,971	20,855	18,592	21,725	19,850	19,588	18,816
Livestock	7,072	10,150	13,012	10,670	8,999	8,696	8,814	9,498	8,991	9,317
Seed	2,484	2,638	2,904	3,220	3,428	3,172	2,987	3,447	3,369	3,129
Farm-origin inputs	23,523	28,824	35,230	34,861	33,282	31,460	33,526	32,795	31,948	31,262
Fertilizer	6,529	6,619	7,369	9,490	8,409	8,018	7,067	7,429	7,258	6,390
Fuels and oils	4,356	4,609	5,635	7,878	8,570	7,888	7,503	7,143	6,584	5,193
Electricity	1,069	1,389	1,447	1,526	1,747	2,041	2,146	2,166	2,073	2,115
Pesticides	1,938	2,656	3,436	3,539	4,201	4,282	4,161	4,768	4,965	4,729
Manufactured inputs	13,892	15,273	17,887	22,434	23,927	22,229	20,877	21,506	20,882	18,426
Short-term interest	4,203	5,167	6,868	8,717	10,722	11,349	10,615	10,396	8,821	7,322
Real estate interest	4,329	5,060	6,190	7,544	9,142	10,481	10,815	10,733	9,878	8,753
Total interest charges	8,532	10,227	13,058	16,261	19,864	21,830	21,430	21,129	18,698	16,074
Repair and operation	5,430	6,638	7,280	7,648	7,587	7,730	7,543	7,850	7,450	7,303
Hired labor	7,131	8,279	8,982	9,294	8,932	10,182	9,660	9,838	10,347	10,883
Machine hire and custom work	1,682	1,776	2,063	1,823	1,984	2,025	1,896	2,170	2,185	2,057
Dairy deduction	0	0	0	0	0	0	633	656	163	431
Other operating expenses	6,129	7,703	9,047	9,378	8,865	10,700	10,646	10,860	11,522	11,260
Total operating expenses	20,372	24,396	27,732	28,143	28,368	30,637	30,378	31,374	31,667	31,934
Depreciation	15,493	16,963	19,345	21,474	23,573	23,886	23,491	23,020	21,101	19,784
Taxes	3,660	3,603	3,871	3,891	4,246	4,394	4,323	4,384	4,423	4,526
Net rent to non-operator landlord	3,412	3,963	6,182	6,075	6,184	6,218	5,441	7,504	7,387	6,845
Other overhead expenses	22,565	24,529	29,398	31,440	36,003	34,499	33,255	34,908	32,911	31,255
Total production expenses	88,884	103,249	123,305	133,139	139,444	140,654	139,466	141,712	136,108	128,951

1/ Includes operator household. 2/ Totals may not add due to rounding. P = preliminary.

Information contact: Richard Kodl (202) 786-1808.

Transportation

Table 36.—Rail rates; grain and fruit-vegetable shipments; truck costs

	Annual			1986					1987	
	1984	1985	1986 P	Feb	Sept	Oct	Nov	Dec	Jan	Feb
Rail freight rate index ^{1/} (Dec 1984=100)										
All products	99.3	100.0	100.7	101.0	100.6	100.6	100.6 P	99.6 P	99.7 P	99.7 P
Farm products	98.7	99.0	99.6	99.7	99.7	99.1	99.1 P	98.4 P	98.5 P	98.5 P
Grain	98.6	98.3	98.8	99.0	99.2	98.5	98.4 P	97.6 P	97.8 P	97.8 P
Food products	99.1	100.1	99.9	100.9	99.6	99.2	98.4 P	98.2 P	98.4 P	98.4 P
Grain										
Rail carloadings (thou cars) 2/	27.2	22.8	24.3	22.5	26.5	32.8	29.8	24.8	23.0	26.7 P
Fresh fruit & vegetable shipments										
Piggy back (thou cwt) 3/ 4/	570	602	622	534	471 P	524 P	486 P	479 P	527 P	570 P
Rail (thou cwt) 3/ 4/	640	532	544	566	511 P	554 P	705 P	740 P	829 P	640 P
Truck (thou cwt) 3/ 4/	8,006	8,298	8,549	7,596	6,096 P	8,162 P	8,511 P	8,345 P	8,180 P	8,006 P
Cost of operating trucks hauling produce 5/										
Owner operator (cts/mile)	115.5	116.1	113.1	115.4	111.8	111.8	112.4	113.0	114.9	115.0
Fleet operation (cts/mile)	115.3	116.7	113.6	116.5	112.2	112.4	113.0	113.5	115.2	115.2

1/ Department of Labor, Bureau of Labor Statistics, revised March 1985. 2/ Weekly average; from Association of American Railroads. 3/ Weekly average; from Agricultural Marketing Service, USDA. 4/ Preliminary data for 1985 and 1986. 5/ Office of Transportation, USDA. P = preliminary.

Information contact: T.O. Hutchinson (202) 786-1840.

Indicators of Farm Productivity

Table 37.—Indexes of farm production, input use, and productivity.

(See the Jan.-Feb. 1987 issue.)

Information contact: James Johnson (202) 786-1800.

Table 38.—Supply and use of fertilizer

(See the June 1986 issue.)

Information contact: Paul Andrienas (202) 786-1456.

Table 39.—Supply and use of major pesticides

(See the Oct. 1986 issue.)

Information contact: Stan Daberkow (202) 786-1458.

Food Supply and Use

Table 40.—Per capita food consumption indexes (1967 = 100)

(See the Dec. 1986 issue.)

Information contact: Harry Harp (202) 786-1870.

Table 41.—Per capita consumption of major food commodities (retail weight)

(See the Dec. 1986 issue.)

Information contact: Harry Harp (202) 786-1870.

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